Material Safety Data Sheet

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M™ Hi-Strength Spray Adhesive 90 (aerosol)
MANUFACTURER: 3M
DIVISION: Industrial Adhesives and Tapes Division

ADDRESS: 3M Center, St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 04/04/12
Supercedes Date: 03/30/12

Document Group: 16-4935-9

Product Use:
Intended Use: aerosol adhesive
Specific Use: hi-strength aerosol adhesive

SECTION 2: INGREDIENTS

Ingredient	C.A.S. No.	% by Wt
Dimethyl ether	115-10-6	35 - 45
Methyl acetate	79-20-9	25 - 35
N.J.T.S. Reg No. 0449960-6448P	Trade Secret	10 - 20
Cyclohexane	110-82-7	7 - 13
Propellant R-152a	75-37-6	1 - 5
Pentane	109-66-0	1 - 5

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Aerosol
Odor, Color, Grade: clear, sweet fruity odor
General Physical Form: Gas
Immediate health, physical, and environmental hazards: Closed containers exposed to heat from fire may build pressure and explode. Extremely flammable liquid and vapor. Vapors may travel long distances along the ground or floor to an ignition source and flash back. Aerosol container contains flammable material under pressure. May cause target organ effects.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:
Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Skin Contact:
Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, and itching.

Inhalation:
Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Intentional concentration and inhalation may be harmful or fatal.

Cardiac Sensitization: Signs/symptoms may include irregular heartbeat (arrhythmia), faintness, chest pain, and may be fatal.

Prolonged or repeated exposure may cause:
Respiratory Effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish colored skin (cyanosis), sputum production, changes in lung function tests, and/or respiratory failure.

May be absorbed following inhalation and cause target organ effects.

Ingestion:
Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May be absorbed following ingestion and cause target organ effects.

Target Organ Effects:
Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.
Skin Contact: Wash affected area with soap and water. If signs/symptoms develop, get medical attention.
Inhalation: Remove person to fresh air. Get immediate medical attention.
If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

4.2 NOTE TO PHYSICIANS

Exposure may increase myocardial irritability. Do not administer sympathomimetic drugs unless absolutely necessary.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature	*No Data Available*

Flash Point	-42.00 ºF [*Test Method:* Tagliabue Closed Cup]
Flammable Limits(LEL)	*No Data Available*
Flammable Limits(UEL)	*No Data Available*
OSHA Flammability Classification:	Class IA Flammable Liquid

5.2 EXTINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Closed containers exposed to heat from fire may build pressure and explode. Extremely flammable liquid and vapor. Vapors may travel long distances along the ground or floor to an ignition source and flash back. Aerosol container contains flammable material under pressure.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

If possible, seal leaking container. Place leaking containers in a well-ventilated area, preferably an operating exhaust hood, or if necessary outdoors on an impermeable surface until appropriate packaging for the leaking container or its contents is available.

Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel.

6.2. Environmental precautions

Collect the resulting residue containing solution. Place in a metal container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible.

Clean-up methods

Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Call 3M-HELPS line (1-800-364-3577) for more information on handling and managing the spill. Contain spill. Clean up residue.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Keep away from heat, sparks, open flame, pilot lights and other sources of ignition. Avoid prolonged or repeated skin contact. Avoid eye contact with vapors, mists, or spray. Keep out of the reach of children. Vapors may ignite explosively. May cause flash fire. Prevent build-up of vapors - open all windows and doors. Maintain vapor concentrations below recommended exposure limits. Use only with cross-ventilation. Without adequate ventilation, vapors may settle in low-lying areas. Keep away from heat, sparks, and open flame. Do not smoke or ignite matches, lighters, etc.

7.2 STORAGE

Store away from acids. Store away from heat. Store out of direct sunlight.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Use with appropriate local exhaust ventilation. Do not use in a confined area or areas with little or no air movement. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control mist, vapor, or spray. If ventilation is not adequate, use respiratory protection equipment.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact. Avoid eye contact with vapors, mists, or spray.
The following eye protection(s) are recommended: Safety Glasses with side shields
.

8.2.2 Skin Protection

Avoid skin contact. Avoid prolonged or repeated skin contact.

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.
Gloves made from the following material(s) are recommended: Nitrile Rubber
.

8.2.3 Respiratory Protection

Avoid breathing of vapors, mists or spray.
Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or fullface air-purifying respirator with organic vapor cartridges
. Select and use respiratory protection to prevent an inhalation exposure based on the results of an exposure assessment. Consult with your respirator manufacturer for selection of appropriate types of respirators. Organic vapor cartridges may have short service life.

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

8.3 EXPOSURE GUIDELINES

Ingredient	Authority	Type	Limit	Additional Information
Propellant R-152a	AIHA	TWA	2700 mg/m3	
Propellant R-152a	CMRG	TWA	1000 ppm	
Cyclohexane	ACGIH	TWA	100 ppm	
Cyclohexane	OSHA	TWA	1050 mg/m3	
Dimethyl ether	AIHA	TWA	1880 mg/m3	
Dimethyl ether	CMRG	TWA	1000 ppm	
Methyl acetate	ACGIH	TWA	200 ppm	
Methyl acetate	ACGIH	STEL	250 ppm	
Methyl acetate	OSHA	TWA	610 mg/m3	
Pentane	ACGIH	TWA	600 ppm	
Pentane	OSHA	TWA	2950 mg/m3	

SOURCE OF EXPOSURE LIMIT DATA:
ACGIH: American Conference of Governmental Industrial Hygienists
CMRG: Chemical Manufacturer Recommended Guideline
OSHA: Occupational Safety and Health Administration
AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific Physical Form:	Aerosol
Odor, Color, Grade:	clear, sweet fruity odor
General Physical Form:	Gas
Autoignition temperature	*No Data Available*
Flash Point	-42.00 ºF [*Test Method:* Tagliabue Closed Cup]
Flammable Limits(LEL)	*No Data Available*
Flammable Limits(UEL)	*No Data Available*
Boiling Point	*Not Applicable*
Density	0.726 g/ml
Vapor Density	2.97 [*Ref Std:* AIR=1]
Specific Gravity	0.726 [*Ref Std:* WATER=1]
pH	*No Data Available*
Melting point	*Not Applicable*
Solubility in Water	Nil
Evaporation rate	1.90 [*Ref Std:* ETHER=1]
Hazardous Air Pollutants	<=0 % weight [*Test Method:* Calculated]
Volatile Organic Compounds	<=631 g/l [*Details:* EU VOC content]
Kow - Oct/Water partition coef	*No Data Available*
Percent volatile	<=75 % weight
VOC Less H2O & Exempt Solvents	<= 55 % [*Test Method:* calculated SCAQMD rule 443.1]
VOC Less H2O & Exempt Solvents	<=3.32 lb/gal [*Test Method:* calculated SCAQMD rule 443.1]
VOC Less H2O & Exempt Solvents	<=55 % [*Test Method:* calculated per CARB title 2]
Viscosity	*Not Applicable*

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid:
10.1 Conditions to avoid
Heat

10.2 Materials to avoid
Strong oxidizing agents

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

Substance	Condition
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Irritant Vapors or Gases	During Combustion

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Incinerate in a permitted hazardous waste incinerator. Facility must be capable of handling aerosol cans. Dispose of empty product containers in a sanitary landfill.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable)

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14:TRANSPORT INFORMATION

ID Number(s):
62-4942-4730-7, 62-4942-4920-4, 62-4942-4921-2, 62-4942-4925-3, 62-4942-4930-3, 62-4942-4935-2, 62-4942-4950-1, 62-4942-4955-0, 62-4942-4970-9, 62-4942-4975-8, CS-0406-7111-0

For Transport Information, please visit http://3M.com/Transportinfo or call 1-800-364-3577 or 651-737-6501.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

Contact 3M for more information.

311/312 Hazard Categories:
Fire Hazard - Yes Pressure Hazard - Yes Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

Ingredient	C.A.S. No	% by Wt
Cyclohexane	110-82-7	7 - 13

STATE REGULATIONS

Contact 3M for more information.

CHEMICAL INVENTORIES

The components of this product are in compliance with the chemical notification requirements of TSCA.

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS. Contact 3M for more information.

INTERNATIONAL REGULATIONS

Contact 3M for more information.

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health: 2 **Flammability:** 4 **Reactivity:** 0 **Special Hazards:** None
Aerosol Storage Code: 3

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Revision Changes:
Section 9: Property description for optional properties was modified.
Section 2: Ingredient table was modified.
Section 8: Exposure guidelines ingredient information was modified.

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3M USA MSDSs are available at www.3M.com

Material Safety Data Sheet

PRODUCT NAME: 3M(TM) Super 77 Multipurpose Spray Adhesive and 3M(TM) Hi-Strength 90 Spray Adhesive Mini-Pallet
MANUFACTURER: 3M
DIVISION: Industrial Adhesives and Tapes

ADDRESS: 3M Center
St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 02/25/2004
Supercedes Date: Initial Issue

Document Group: 19-0877-1

ID Number(s):
62-4977-4949-9

This product is a kit or a multipart product which consists of multiple, independently packaged components. An MSDS for each of these components is included. Please do not separate the component MSDSs from this cover page. The document numbers of the MSDSs for components of this product are:

16-3472-4, 16-4935-9

No revision information is available.

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Material Safety Data Sheet

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M(TM) Super 77(TM) Multipurpose Adhesive (Aerosol)
MANUFACTURER: 3M
DIVISION: Industrial Adhesives and Tapes Division

ADDRESS: 3M Center, St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 04/19/12
Supercedes Date: 03/30/12

Document Group: 16-3472-4

Product Use:
Intended Use: general purpose aerosol adhesive
Specific Use: General Purpose Aerosol adhesive

SECTION 2: INGREDIENTS

Ingredient	C.A.S. No.	% by Wt
Non-volatile components - N.J.T.S. Registry No. 04499600-6433P	Trade Secret	20 - 30
Acetone	67-64-1	20 - 30
Propane	74-98-6	15 - 25
Cyclohexane	110-82-7	10 - 20
Petroleum distillates	64742-49-0	10 - 20
Hexane	110-54-3	< 1

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Aerosol
Odor, Color, Grade: Clear, sweet, fruity odor
General Physical Form: Gas aerosol
Immediate health, physical, and environmental hazards: Closed containers exposed to heat from fire may build pressure and explode. Extremely flammable liquid and vapor. Vapors may travel long distances along the ground or floor to an ignition source and flash back. Aerosol container contains flammable material under pressure. May cause target organ effects. Contains a

chemical or chemicals which can cause birth defects or other reproductive harm.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:
Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Skin Contact:
Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, and itching.

Inhalation:
Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Single exposure, above recommended guidelines, may cause:
Cardiac Sensitization: Signs/symptoms may include irregular heartbeat (arrhythmia), faintness, chest pain, and may be fatal.

Intentional concentration and inhalation may be harmful or fatal.

May be absorbed following inhalation and cause target organ effects.

Ingestion:
Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May be absorbed following ingestion and cause target organ effects.

Target Organ Effects:
Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Prolonged or repeated exposure may cause:
Peripheral Neuropathy: Signs/symptoms may include tingling or numbness of the extremities, incoordination, weakness of the hands and feet, tremors and muscle atrophy.

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

Skin Contact: Wash affected area with soap and water. If signs/symptoms develop, get medical attention.

Inhalation: Remove person to fresh air. Get immediate medical attention.

If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

4.2 NOTE TO PHYSICIANS

Exposure may increase myocardial irritability. Do not administer sympathomimetic drugs unless absolutely necessary.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature	*No Data Available*
Flash Point	-42.00 ºF [*Test Method:* Tagliabue Closed Cup]
Flammable Limits(LEL)	*No Data Available*
Flammable Limits(UEL)	*No Data Available*
OSHA Flammability Classification:	Class IA Flammable Liquid

5.2 EXTINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Closed containers exposed to heat from fire may build pressure and explode. Extremely flammable liquid and vapor. Vapors may travel long distances along the ground or floor to an ignition source and flash back. Aerosol container contains flammable material under pressure.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation and personal protective equipment. Evacuate unprotected and untrained personnel from the hazard area. The spill should be cleaned up by qualified personnel. Ventilate the area. WARNING ! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. If it can be done safely, place the leaking containers in an exhaust hood or well- ventilated area.WARNING ! To avoid problems with pressure buildup, slowly leaking pressurized aerosol cans should not be placed in sealed containers. Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Remove all ignition sources such as flames, smoking materials, and electrical spark sources. Use only non-sparking tools. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and MSDS.

6.2. Environmental precautions

Place in a metal container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible.

Clean-up methods

Contain spill, using absorbent if necessary. Collect spilled material with non-sparking tools. Clean up residue. Place depressurized cans and clean up wastes in a metal container approved for transportation. Seal the container. Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Call 3M-HELPS line (1-800-364-3577) for more information on handling and managing the spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Collect as much of the spilled material as possible using non-sparking tools. Clean up residue with an appropriate organic solvent. Seal the container.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Keep away from heat, sparks, open flame, pilot lights and other sources of ignition. Do not pierce or burn container, even after use. No smoking while handling this material. Do not spray near flames or sources of ignition. Avoid breathing of vapors, mists or spray. Avoid eye contact with vapors, mists, or spray. Keep out of the reach of children. Vapors may ignite explosively. May cause flash fire. Prevent build-up of vapors - open all windows and doors. Maintain vapor concentrations below recommended exposure limits. Use only with cross-ventilation. Without adequate ventilation, vapors may settle in low-lying areas. Keep away from heat, sparks, and open flame. Do not smoke or ignite matches, lighters, etc. Avoid contact with oxidizing agents.

7.2 STORAGE

Store away from acids. Store away from heat. Store out of direct sunlight. Store away from oxidizing agents.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Use with appropriate local exhaust ventilation. Use in an enclosed process area is recommended. Use with functioning spray booth or local exhaust. Use in a well-ventilated area. If exhaust ventilation is not available, use appropriate respiratory protection. Do not use in a confined area or areas with little or no air movement. Do not remain in area where available oxygen may be reduced. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control mist, vapor, or spray. If ventilation is not adequate, use respiratory protection equipment. Do not use in a confined area or areas with little or no air movement. If exhaust ventilation is not adequate, use appropriate respiratory protection. Provide ventilation adequate to control vapor concentrations below recommended exposure limits and/or control spray or mist.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact with vapors, mists, or spray.
The following eye protection(s) are recommended: Safety Glasses with side shields
.

8.2.2 Skin Protection

Not applicable. Avoid skin contact.

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.
Gloves made from the following material(s) are recommended: Polymer laminate
.

8.2.3 Respiratory Protection

Avoid breathing of vapors, mists or spray.
Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or full facepiece air-purifying respirator suitable for organic vapors
. Select and use respiratory protection to prevent an inhalation exposure based on the results of an exposure assessment. Consult with your respirator manufacturer for selection of appropriate types of respirators.

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

8.3 EXPOSURE GUIDELINES

Ingredient	Authority	Type	Limit	Additional Information
Acetone	ACGIH	TWA	500 ppm	
Acetone	ACGIH	STEL	750 ppm	
Acetone	OSHA	TWA	2400 mg/m3	
Hexane	ACGIH	TWA	50 ppm	Skin Notation*
Hexane	OSHA	TWA	1800 mg/m3	
Petroleum distillates	CMRG	TWA	50 ppm	
Propane	OSHA	TWA	1800 mg/m3	

* Substance(s) refer to the potential contribution to the overall exposure by the cutaneous route including mucous membrane and eye, either by airborne or, more particularly, by direct contact with the substance. Vehicles can alter skin absorption.

SOURCE OF EXPOSURE LIMIT DATA:
ACGIH: American Conference of Governmental Industrial Hygienists
CMRG: Chemical Manufacturer Recommended Guideline
OSHA: Occupational Safety and Health Administration
AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific Physical Form:	Aerosol
Odor, Color, Grade:	Clear, sweet, fruity odor
General Physical Form:	Gas aerosol
Autoignition temperature	*No Data Available*
Flash Point	-42.00 ºF [*Test Method:* Tagliabue Closed Cup]
Flammable Limits(LEL)	*No Data Available*
Flammable Limits(UEL)	*No Data Available*
Boiling Point	*Not Applicable*
Density	0.726 g/ml
Vapor Density	2.97 [*Ref Std:* AIR=1]
Specific Gravity	0.726 [*Ref Std:* WATER=1]
pH	*No Data Available*
Melting point	*No Data Available*
Solubility in Water	Nil
Evaporation rate	1.90 [*Ref Std:* ETHER=1]
Hazardous Air Pollutants	<=0.4 % weight [*Test Method:* Calculated]
Volatile Organic Compounds	<=537 g/l [*Details:* EU VOC content]
Kow - Oct/Water partition coef	*No Data Available*
Percent volatile	<=75 % weight [*Details:* all volatiles]
VOC Less H2O & Exempt Solvents	<=51 % weight [*Test Method:* calculated SCAQMD rule 443.1]
VOC Less H2O & Exempt Solvents	<=3.82 lb/gal [*Test Method:* calculated SCAQMD rule 443.1]
VOC Less H2O & Exempt Solvents	<=458 g/l [*Test Method:* calculated SCAQMD rule 443.1]
Viscosity	*Not Applicable*
Solids Content	>=22.4 %

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid:
10.1 Conditions to avoid
Heat

10.2 Materials to avoid
Strong oxidizing agents

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

Substance	Condition
Aldehydes	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Vent cylinder or pressurized container in an operating exhaust hood or remote area.
A qualified person should adjust the release rate so gas concentration in ducts is less than 20% of the lower explosive limit (LEL). The LEL is the lowest concentration that can propagate (spread) a flame. Incinerate uncured product in a permitted hazardous waste incinerator.
Incinerate in a permitted hazardous waste incinerator. For quantities <10 lbs. (5 kg):
As a disposal alternative, dispose of waste product in a permitted hazardous waste facility.
The facility should be equipped to handle gaseous waste.
Facility must be capable of handling aerosol cans. Dispose of empty product containers in a sanitary landfill.
RECYCLE EMPTY AEROSOL CONTAINERS WHERE AVAILABLE.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable)

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14:TRANSPORT INFORMATION

ID Number(s):
62-4977-4730-3, 62-4977-4925-9, 62-4977-4929-1, 62-4977-4930-9, 62-4977-4935-8

For Transport Information, please visit http://3M.com/Transportinfo or call 1-800-364-3577 or 651-737-6501.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS
Contact 3M for more information.

311/312 Hazard Categories:
Fire Hazard - Yes Pressure Hazard - Yes Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

STATE REGULATIONS
Contact 3M for more information.

CHEMICAL INVENTORIES
The components of this product are in compliance with the chemical notification requirements of TSCA.

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS. Contact 3M for more information.

INTERNATIONAL REGULATIONS
Contact 3M for more information.

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification
Health: 2 **Flammability:** 4 **Reactivity:** 0 **Special Hazards:** None
Aerosol Storage Code: 3

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

HMIS Hazard Classification
Health: 2 **Flammability:** 4 **Reactivity:** 0 **Protection:** X - See PPE section.

Hazardous Material Identification System (HMIS®) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint and Coatings Association (NPCA).

Reason for Reissue: Removed stock numbers.

Revision Changes:
Section 8: Respiratory protection - recommended respirators information was modified.

DISCLAIMER: The information in this Material Safety Data Sheet (MSDS) is believed to be correct as of the date issued. 3M

MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

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3M USA MSDSs are available at www.3M.com

Material Safety Data Sheet

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M™ Hi-Strength Spray Adhesive 90 (aerosol)
MANUFACTURER: 3M
DIVISION: Industrial Adhesives and Tapes Division

ADDRESS: 3M Center, St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 04/04/12
Supercedes Date: 03/30/12

Document Group: 16-4935-9

Product Use:
Intended Use: aerosol adhesive
Specific Use: hi-strength aerosol adhesive

SECTION 2: INGREDIENTS

Ingredient	C.A.S. No.	% by Wt
Dimethyl ether	115-10-6	35 - 45
Methyl acetate	79-20-9	25 - 35
N.J.T.S. Reg No. 0449960-6448P	Trade Secret	10 - 20
Cyclohexane	110-82-7	7 - 13
Propellant R-152a	75-37-6	1 - 5
Pentane	109-66-0	1 - 5

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Aerosol
Odor, Color, Grade: clear, sweet fruity odor
General Physical Form: Gas
Immediate health, physical, and environmental hazards: Closed containers exposed to heat from fire may build pressure and explode. Extremely flammable liquid and vapor. Vapors may travel long distances along the ground or floor to an ignition source and flash back. Aerosol container contains flammable material under pressure. May cause target organ effects.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:
Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Skin Contact:
Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, and itching.

Inhalation:
Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Intentional concentration and inhalation may be harmful or fatal.

Cardiac Sensitization: Signs/symptoms may include irregular heartbeat (arrhythmia), faintness, chest pain, and may be fatal.

Prolonged or repeated exposure may cause:
Respiratory Effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish colored skin (cyanosis), sputum production, changes in lung function tests, and/or respiratory failure.

May be absorbed following inhalation and cause target organ effects.

Ingestion:
Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May be absorbed following ingestion and cause target organ effects.

Target Organ Effects:
Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.
Skin Contact: Wash affected area with soap and water. If signs/symptoms develop, get medical attention.
Inhalation: Remove person to fresh air. Get immediate medical attention.
If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

4.2 NOTE TO PHYSICIANS

Exposure may increase myocardial irritability. Do not administer sympathomimetic drugs unless absolutely necessary.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature	*No Data Available*

Flash Point	-42.00 ºF [*Test Method:* Tagliabue Closed Cup]
Flammable Limits(LEL)	*No Data Available*
Flammable Limits(UEL)	*No Data Available*
OSHA Flammability Classification:	Class IA Flammable Liquid

5.2 EXTINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Closed containers exposed to heat from fire may build pressure and explode. Extremely flammable liquid and vapor. Vapors may travel long distances along the ground or floor to an ignition source and flash back. Aerosol container contains flammable material under pressure.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

If possible, seal leaking container. Place leaking containers in a well-ventilated area, preferably an operating exhaust hood, or if necessary outdoors on an impermeable surface until appropriate packaging for the leaking container or its contents is available.

Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel.

6.2. Environmental precautions

Collect the resulting residue containing solution. Place in a metal container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible.

Clean-up methods

Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Call 3M-HELPS line (1-800-364-3577) for more information on handling and managing the spill. Contain spill. Clean up residue.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Keep away from heat, sparks, open flame, pilot lights and other sources of ignition. Avoid prolonged or repeated skin contact. Avoid eye contact with vapors, mists, or spray. Keep out of the reach of children. Vapors may ignite explosively. May cause flash fire. Prevent build-up of vapors - open all windows and doors. Maintain vapor concentrations below recommended exposure limits. Use only with cross-ventilation. Without adequate ventilation, vapors may settle in low-lying areas. Keep away from heat, sparks, and open flame. Do not smoke or ignite matches, lighters, etc.

7.2 STORAGE

Store away from acids. Store away from heat. Store out of direct sunlight.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Use with appropriate local exhaust ventilation. Do not use in a confined area or areas with little or no air movement. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control mist, vapor, or spray. If ventilation is not adequate, use respiratory protection equipment.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact. Avoid eye contact with vapors, mists, or spray.
The following eye protection(s) are recommended: Safety Glasses with side shields
.

8.2.2 Skin Protection

Avoid skin contact. Avoid prolonged or repeated skin contact.

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.
Gloves made from the following material(s) are recommended: Nitrile Rubber
.

8.2.3 Respiratory Protection

Avoid breathing of vapors, mists or spray.
Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or fullface air-purifying respirator with organic vapor cartridges
. Select and use respiratory protection to prevent an inhalation exposure based on the results of an exposure assessment. Consult with your respirator manufacturer for selection of appropriate types of respirators. Organic vapor cartridges may have short service life.

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

8.3 EXPOSURE GUIDELINES

Ingredient	Authority	Type	Limit	Additional Information
Propellant R-152a	AIHA	TWA	2700 mg/m3	
Propellant R-152a	CMRG	TWA	1000 ppm	
Cyclohexane	ACGIH	TWA	100 ppm	
Cyclohexane	OSHA	TWA	1050 mg/m3	
Dimethyl ether	AIHA	TWA	1880 mg/m3	
Dimethyl ether	CMRG	TWA	1000 ppm	
Methyl acetate	ACGIH	TWA	200 ppm	
Methyl acetate	ACGIH	STEL	250 ppm	
Methyl acetate	OSHA	TWA	610 mg/m3	
Pentane	ACGIH	TWA	600 ppm	
Pentane	OSHA	TWA	2950 mg/m3	

SOURCE OF EXPOSURE LIMIT DATA:
ACGIH: American Conference of Governmental Industrial Hygienists
CMRG: Chemical Manufacturer Recommended Guideline
OSHA: Occupational Safety and Health Administration
AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific Physical Form:	Aerosol
Odor, Color, Grade:	clear, sweet fruity odor
General Physical Form:	Gas
Autoignition temperature	*No Data Available*
Flash Point	-42.00 ºF [*Test Method:* Tagliabue Closed Cup]
Flammable Limits(LEL)	*No Data Available*
Flammable Limits(UEL)	*No Data Available*
Boiling Point	*Not Applicable*
Density	0.726 g/ml
Vapor Density	2.97 [*Ref Std:* AIR=1]
Specific Gravity	0.726 [*Ref Std:* WATER=1]
pH	*No Data Available*
Melting point	*Not Applicable*
Solubility in Water	Nil
Evaporation rate	1.90 [*Ref Std:* ETHER=1]
Hazardous Air Pollutants	<=0 % weight [*Test Method:* Calculated]
Volatile Organic Compounds	<=631 g/l [*Details:* EU VOC content]
Kow - Oct/Water partition coef	*No Data Available*
Percent volatile	<=75 % weight
VOC Less H2O & Exempt Solvents	<= 55 % [*Test Method:* calculated SCAQMD rule 443.1]
VOC Less H2O & Exempt Solvents	<=3.32 lb/gal [*Test Method:* calculated SCAQMD rule 443.1]
VOC Less H2O & Exempt Solvents	<=55 % [*Test Method:* calculated per CARB title 2]
Viscosity	*Not Applicable*

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid:
10.1 Conditions to avoid
Heat

10.2 Materials to avoid
Strong oxidizing agents

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

Substance	Condition
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Irritant Vapors or Gases	During Combustion

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Incinerate in a permitted hazardous waste incinerator. Facility must be capable of handling aerosol cans. Dispose of empty product containers in a sanitary landfill.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable)

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14:TRANSPORT INFORMATION

ID Number(s):
62-4942-4730-7, 62-4942-4920-4, 62-4942-4921-2, 62-4942-4925-3, 62-4942-4930-3, 62-4942-4935-2, 62-4942-4950-1, 62-4942-4955-0, 62-4942-4970-9, 62-4942-4975-8, CS-0406-7111-0

For Transport Information, please visit http://3M.com/Transportinfo or call 1-800-364-3577 or 651-737-6501.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

Contact 3M for more information.

311/312 Hazard Categories:
Fire Hazard - Yes Pressure Hazard - Yes Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

Ingredient	C.A.S. No	% by Wt
Cyclohexane	110-82-7	7 - 13

STATE REGULATIONS

Contact 3M for more information.

CHEMICAL INVENTORIES

The components of this product are in compliance with the chemical notification requirements of TSCA.

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS. Contact 3M for more information.

INTERNATIONAL REGULATIONS

Contact 3M for more information.

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health: 2 **Flammability:** 4 **Reactivity:** 0 **Special Hazards:** None
Aerosol Storage Code: 3

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Revision Changes:
Section 9: Property description for optional properties was modified.
Section 2: Ingredient table was modified.
Section 8: Exposure guidelines ingredient information was modified.

DISCLAIMER: The information in this Material Safety Data Sheet (MSDS) is believed to be correct as of the date issued. 3M MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

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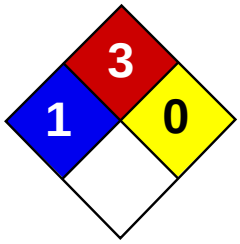

Health	2
Fire	3
Reactivity	0
Personal Protection	H

Material Safety Data Sheet
Acetone MSDS

Section 1: Chemical Product and Company Identification

Product Name: Acetone

Catalog Codes: SLA3502, SLA1645, SLA3151, SLA3808

CAS#: 67-64-1

RTECS: AL3150000

TSCA: TSCA 8(b) inventory: Acetone

CI#: Not applicable.

Synonym: 2-propanone; Dimethyl Ketone; Dimethylformaldehyde; Pyroacetic Acid

Chemical Name: Acetone

Chemical Formula: C3-H6-O

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call: 1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Acetone	67-64-1	100

Toxicological Data on Ingredients: Acetone: ORAL (LD50): Acute: 5800 mg/kg [Rat]. 3000 mg/kg [Mouse]. 5340 mg/kg [Rabbit]. VAPOR (LC50): Acute: 50100 mg/m 8 hours [Rat]. 44000 mg/m 4 hours [Mouse].

Section 3: Hazards Identification

Potential Acute Health Effects:
Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator).

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female, Reproductive system/toxin/male [SUSPECTED]. The substance is toxic to central nervous system (CNS). The substance may be toxic to kidneys, the reproductive system, liver, skin. Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Get medical attention.

Skin Contact:
In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used.Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms appear.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: 465°C (869°F)

Flash Points: CLOSED CUP: -20°C (-4°F). OPEN CUP: -9°C (15.8°F) (Cleveland).

Flammable Limits: LOWER: 2.6% UPPER: 12.8%

Products of Combustion: These products are carbon oxides (CO, CO2).

Fire Hazards in Presence of Various Substances: Highly flammable in presence of open flames and sparks, of heat.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available. Slightly explosive in presence of open flames and sparks, of oxidizing materials, of acids.

Fire Fighting Media and Instructions:
Flammable liquid, soluble or dispersed in water. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use alcohol foam, water spray or fog.

Special Remarks on Fire Hazards: Vapor may travel considerable distance to source of ignition and flash back.

Special Remarks on Explosion Hazards:
Forms explosive mixtures with hydrogen peroxide, acetic acid, nitric acid, nitric acid + sulfuric acid, chromic anydride, chromyl chloride, nitrosyl chloride, hexachloromelamine, nitrosyl perchlorate, nitryl perchlorate, permonosulfuric acid, thiodiglycol + hydrogen peroxide, potassium ter-butoxide, sulfur dichloride, 1-methyl-1,3-butadiene, bromoform, carbon, air, chloroform, thitriazylperchlorate.

Section 6: Accidental Release Measures

Small Spill:
Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

Large Spill:
Flammable liquid. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep locked up.. Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, reducing agents, acids, alkalis.

Storage:
Store in a segregated and approved area (flammables area) . Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Keep away from direct sunlight and heat and avoid all possible sources of ignition (spark or flame).

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:
Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 500 STEL: 750 (ppm) from ACGIH (TLV) [United States] TWA: 750 STEL: 1000 (ppm) from OSHA (PEL) [United States] TWA: 500 STEL: 1000 [Austalia] TWA: 1185 STEL: 2375 (mg/m3) [Australia] TWA: 750 STEL: 1500 (ppm) [United Kingdom (UK)] TWA: 1810 STEL: 3620 (mg/m3) [United Kingdom (UK)] TWA: 1800 STEL: 2400 from OSHA (PEL) [United States]Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Fruity. Mint-like. Fragrant. Ethereal

Taste: Pungent, Sweetish

Molecular Weight: 58.08 g/mole

Color: Colorless. Clear

pH (1% soln/water): Not available.

Boiling Point: 56.2°C (133.2°F)

Melting Point: -95.35 (-139.6°F)

Critical Temperature: 235°C (455°F)

Specific Gravity: 0.79 (Water = 1)

Vapor Pressure: 24 kPa (@ 20°C)

Vapor Density: 2 (Air = 1)

Volatility: Not available.

Odor Threshold: 62 ppm

Water/Oil Dist. Coeff.: The product is more soluble in water; log(oil/water) = -0.2

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water.

Solubility: Easily soluble in cold water, hot water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Excess heat, ignition sources, exposure to moisture, air, or water, incompatible materials.

Incompatibility with various substances: Reactive with oxidizing agents, reducing agents, acids, alkalis.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Inhalation.

Toxicity to Animals:
WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE. Acute oral toxicity (LD50): 3000 mg/kg [Mouse]. Acute toxicity of the vapor (LC50): 44000 mg/m3 4 hours [Mouse].

Chronic Effects on Humans:
CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH. DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female, Reproductive system/toxin/male [SUSPECTED]. Causes damage to the following organs: central nervous system (CNS). May cause damage to the following organs: kidneys, the reproductive system, liver, skin.

Other Toxic Effects on Humans:
Hazardous in case of skin contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans:
May affect genetic material (mutagenicity) based on studies with yeast (S. cerevisiae), bacteria, and hamster fibroblast cells. May cause reproductive effects (fertility) based upon animal studies. May contain trace amounts of benzene and formaldehyde which may cancer and birth defects. Human: passes the placental barrier.

Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects: Skin: May cause skin irritation. May be harmful if absorbed through the skin. Eyes: Causes eye irritation, characterized by a burning sensation, redness, tearing, inflammation, and possible corneal injury. Inhalation: Inhalation at high concentrations affects the sense organs, brain and causes respiratory tract irritation. It also may affect the Central Nervous System (behavior) characterized by dizzness, drowsiness, confusion, headache, muscle weakeness, and possibly motor incoordination, speech abnormalities, narcotic effects and coma. Inhalation may also affect the gastrointestinal tract (nausea, vomiting). Ingestion: May cause irritation of the digestive (gastrointestinal) tract (nausea, vomiting). It may also

affect the Central Nevous System (behavior), characterized by depression, fatigue, excitement, stupor, coma, headache, altered sleep time, ataxia, tremors as well at the blood, liver, and urinary system (kidney, bladder, ureter) and endocrine system. May also have musculoskeletal effects. Chronic Potential Health Effects: Skin: May cause dermatitis. Eyes: Eye irritation.

Section 12: Ecological Information

Ecotoxicity:
Ecotoxicity in water (LC50): 5540 mg/l 96 hours [Trout]. 8300 mg/l 96 hours [Bluegill]. 7500 mg/l 96 hours [Fatthead Minnow]. 0.1 ppm any hours [Water flea].

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The product itself and its products of degradation are not toxic.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: CLASS 3: Flammable liquid.

Identification: : Acetone UNNA: 1090 PG: II

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:
California prop. 65: This product contains the following ingredients for which the State of California has found to cause reproductive harm (male) which would require a warning under the statute: Benzene California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: Benzene California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Benzene, Formaldehyde Connecticut hazardous material survey.: Acetone Illinois toxic substances disclosure to employee act: Acetone Illinois chemical safety act: Acetone New York release reporting list: Acetone Rhode Island RTK hazardous substances: Acetone Pennsylvania RTK: Acetone Florida: Acetone Minnesota: Acetone Massachusetts RTK: Acetone Massachusetts spill list: Acetone New Jersey: Acetone New Jersey spill list: Acetone Louisiana spill reporting: Acetone California List of Hazardous Substances (8 CCR 339): Acetone TSCA 8(b) inventory: Acetone TSCA 4(a) final test rules: Acetone TSCA 8(a) IUR: Acetone

Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada):
CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F). CLASS D-2B: Material causing other toxic effects (TOXIC).

DSCL (EEC):
R11- Highly flammable. R36- Irritating to eyes. S9- Keep container in a well-ventilated place. S16- Keep away from sources of ignition - No smoking. S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 3

Reactivity: 0

Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 1

Flammability: 3

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16: Other Information

References:
-Material safety data sheet issued by: la Commission de la SantÃ© et de la SÃ©curitÃ© du Travail du QuÃ©bec. -The Sigma-Aldrich Library of Chemical Safety Data, Edition II. -Hawley, G.G.. The Condensed Chemical Dictionary, 11e ed., New York N.Y., Van Nostrand Reinold, 1987. LOLI, RTECS, HSDB databases. Other MSDSs

Other Special Considerations: Not available.

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Last Updated: 11/01/2010 12:00 PM

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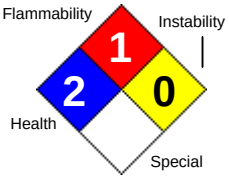
MATERIAL SAFETY DATA SHEET

Klean Strip Adhesive Remover / Klean Strip Premium Stripper

HEALTH	2
FLAMMABILITY	1
PHYSICAL HAZ.	0
PPE	X



Printed: 11/19/2009
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Date Created: 10/13/2009

1. Product and Company Identification

Product Code: 4015.23

Product Name: Klean Strip Adhesive Remover / Klean Strip Premium Stripper

Manufacturer Information

Company Name: W. M. Barr
2105 Channel Avenue
Memphis, TN 38113

Phone Number: (901)775-0100

Emergency Contact: 3E 24 Hour Emergency Contact (800)451-8346

Information: W.M. Barr Customer Service (800)398-3892

Web site address: www.wmbarr.com

Preparer Name: W.M. Barr EHS Dept (901)775-0100

Intended Use: Removal of adhesives, mastics, & contact cement from wood, concrete, metal and masonry.

Synonyms

GKAS94325, QKAS94326, QKAS94326L, GKS3, QKS3, QKS3L, QKS34

2. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	OSHA TWA	ACGIH TWA	Other Limits
1. Dichloromethane {Methylene chloride}	75-09-2	60.0 -100.0 %	25 ppm	50 ppm	No data.
2. Methanol {Methyl alcohol; Carbinol; Wood alcohol}	67-56-1	7.0 -13.0 %	200 ppm	200 ppm	No data.
3. Stoddard solvent {Mineral spirits; Aliphatic Petroleum Distillates; White spirits}	8052-41-3	1.0 -5.0 %	500 ppm	100 ppm	No data.

Hazardous Components (Chemical Name)	RTECS #	OSHA STEL	OSHA CEIL	ACGIH STEL	ACGIH CEIL
1. Dichloromethane {Methylene chloride}	PA8050000	125 ppm (15 min)	No data.	No data.	No data.
2. Methanol {Methyl alcohol; Carbinol; Wood alcohol}	PC1400000	No data.	No data.	250 ppm	No data.
3. Stoddard solvent {Mineral spirits; Aliphatic Petroleum Distillates; White spirits}	WJ8925000	No data.	No data.	No data.	No data.

3. Hazards Identification

Emergency Overview

Danger! Poison. May be fatal or cause blindness if swallowed. Eye and skin irritant. Vapor Harmful. Use only with adequate ventilation to prevent buildup of vapors.

OSHA Regulatory Status:

This material is classified as hazardous under OSHA regulations.

Potential Health Effects (Acute and Chronic)

INHALATION ACUTE EXPOSURE EFFECTS:

Vapor harmful. May cause upper respiratory tract irritation and central nervous system depression with symptoms such as confusion, lightheadedness, nausea, vomiting, headache, drowsiness, and fatigue. Mist or vapor can irritate the throat and lungs. Causes formation of carbon monoxide in blood which may affect the cardiovascular system and central nervous system. Continued exposure may cause unconsciousness and even death. Intentional misuse of this product by deliberately concentrating and inhaling the vapors can be harmful or fatal. Concurrent exposure to carbon monoxide, smoking, and physical activity may increase the level of carboxyhemoglobin levels in the blood resulting in additive effects. This product is a simple asphyxiant.

SKIN CONTACT ACUTE EXPOSURE EFFECTS:
This product is a skin irritant. Product may be absorbed through the skin. Harmful if absorbed through the skin. Effects may range from mild irritation to severe pain, and possibly burns, depending on the intensity of contact. Prolonged or repeated contact may dry the skin and cause irritation. Symptoms include redness, itching, burning, drying and cracking of the skin, and skin burns.

EYE CONTACT ACUTE EXPOSURE EFFECTS:
This material is an eye irritant. Vapors may irritate the eyes. Contact may cause tearing, redness, a stinging or burning feeling, swelling, and blurred vision.

INGESTION ACUTE EXPOSURE EFFECTS:
Poison. May be fatal or cause blindness if swallowed. May cause nausea or vomiting. Aspiration hazard. This material may be aspirated into the lungs during vomiting. If vomiting results in aspiration, chemical pneumonia could occur. It can be readily absorbed by the stomach and intestinal tract. Absorption through the gastrointestinal tract may produce central nervous system depression and systemic effects. Swallowing this material may irritate the mucous membranes of the mouth, throat, and esophagus. May cause cyanosis (blue coloring of the skin and nails from lack of oxygen).

CHRONIC EXPOSURE EFFECTS:
Reports have associated repeated and prolonged overexposure to solvents with neurological and other physiological damage. Prolonged skin contact may cause irritation, redness, swelling and possible tissue destruction. Prolonged or repeated contact may cause dermatitis. Prolonged skin contact may result in absorption of a harmful amount of this material. May cause liver damage. May cause cancer based on animal data (see Section 11. Toxicological Information).

Target Organs:
Blood, central nervous system, liver, skin, cardiovascular system, eyes.

Signs and Symptoms Of Exposure

See Potential Health Effects.

Medical Conditions Generally Aggravated By Exposure

Heart of cardiovascular disorders, kidney disorders, liver disorders, central nervous system disorders, respiratory system (including asthma and other breathing disorders), skin disorders and allergies.

Alcohol may enhance the toxic effects of methylene chloride exposure. May cross the placenta. May be excreted in breast milk.

4. First Aid Measures

Emergency and First Aid Procedures

INHALATION:
If user experiences breathing difficulty, move to air free of vapors. Administer oxygen or artificial respiration until medical assistance can be rendered.

SKIN CONTACT:
Wash with soap and large quantities of water and seek medical attention if irritation from contact persists.

EYE CONTACT:
Immediately flush with water, remove any contact lens, continue flushing with water for at least 15 minutes. Get medical attention immediately.

INGESTION:
Do not induce vomiting, unless directed to by medical personnel. Call your poison control center, hospital,

emergency room, or physician immediately for instructions. Do not give anything by mouth to an unconscious person.

Note to Physician

This product contains methylene chloride and methanol.

This product contains methanol which can cause intoxication and central nervous system depression. Methanol is metabolized to formic acid and formaldehyde. These metabolites can cause metabolic acidosis, visual disturbances and blindness. Since metabolism is required for these toxic symptoms, their onset may be delayed from 6 to 30 hours following ingestion. Ethanol competes for the same metabolic pathway and has been used to prevent methanol metabolism. Ethanol administration is indicated in symptomatic patients or at blood methanol concentrations above 20 ug/dl. Methanol is effectively removed by hemodialysis.
Adrenalin should never be given to a person overexposed to methylene chloride.

Methylene Chloride is an aspiration hazard. Risk of aspiration must be weighed against possible toxicity of the material when determining whether to induce emesis or to perform gastric lavage. This material sensitizes the heart to the effects of sympathomimetic amines. Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in individuals exposed to this material. This material is metabolized to carbon monoxide. Consequently, elevations in carboxyhemoglobin as high as 50% have been reported, and levels may continue to rise for several hours after exposure has ceased. Data in experimental animals suggest there is a narrow margin between concentrations causing anesthesia and death.

5. Fire Fighting Measures

Flammability Classification: NFPA Class IIIB
Flash Pt: NP
Explosive Limits: LEL: No data. UEL: No data.

Fire Fighting Instructions

Self-contained respiratory protection should be provided for fire fighters fighting fires in buildings or confined areas. Storage containers exposed to fire should be kept cool with water spray to prevent pressure build-up. Stay away from heads of containers that have been exposed to intense heat or flame.

Flammable Properties and Hazards

No flash to boil.

Contact of liquid or vapor with flame or hot surfaces will produce toxic gases and a corrosive residue that will cause deterioration of metal.

Vapors are heavier than air and will tend to collect in low areas.

Hazardous Combustion Products

Thermal decomposition or combustion may produce hydrogen chloride, chlorine, phosgene, and oxides of carbon.

Extinguishing Media

Use carbon dioxide, dry powder, water spray, or foam.

Unsuitable Extinguishing Media

None known.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled

Isolate the immediate area. Prevent unauthorized entry. Eliminate all sources of ignition in area and downwind of the spill area. Stay upwind, out of low areas, and ventilate closed spaces before entering. All equipment used when handling this product must be grounded or non-sparking. Do not touch or walk through spilled material. Stop leak if you can do so without risk. Prevent entry into waterways, sewers, or confined areas. A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand, or other non-combustible material and transfer to compatible containers.

7. Handling and Storage

Precautions To Be Taken in Handling

Read carefully all cautions and directions on product label before use. Since empty container retains residue, follow all label warnings even after container is empty. Dispose of empty container according to all regulations. Do not reuse this container.

Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. A source of clean water should be kept in the immediate work area for flushing of the eyes and skin.

Keep away from heat, sparks, flame, and any other source of ignition.

Do not smoke when anywhere near this material.

Ground and bond containers when transferring material.

Do not use in confined spaces, basements, bathrooms, etc, where vapors can build up and explode if ignited by an ignition source.

Vapors are heavier than air and will collect in low areas.

Precautions To Be Taken in Storing

Store in a cool place in original container and protect from sunlight. Exposure to high temperatures or prolonged exposure to sun may cause can to leak or swell. Once opened, remover should be used within six months or properly disposed of to avoid can deterioration. Do not store near flames or at elevated temperatures.

Keep container tightly closed when not in use.

8. Exposure Controls/Personal Protection

Respiratory Equipment (Specify Type)

For occasional consumer use - Use with adequate ventilation to prevent a build-up of vapors in confined areas. Open windows or position fans to provide cross ventilation. If a mild to strong odor is noticeable, ventilation is not adequate.

For OSHA controlled workplace and other regular users - Use only with adequate ventilation under engineered air control systems designed to prevent exceeding appropriate TLVs. For occasional use, where engineered air control is not feasible, use properly maintained and properly fitted NIOSH approved self-contained breathing apparatus for chlorinated solvent vapors. A dust mask does not provide protection against vapors.

Eye Protection

Safety glasses, chemical goggles, or face shields are recommended to safeguard against potential eye contact, irritation, or injury. Contact lenses should not be worn while working with chemicals.

Protective Gloves

Wear gloves with as much resistance to the chemical ingredients as possible. Laminate film gloves offer the best protection. Other glove materials will be degraded by methylene chloride, but may provide protection for some amount of time, based on the type of glove and the conditions of use. Consult your glove supplier for additional information. Gloves contaminated with product should be discarded and not reused.

Other Protective Clothing

Various application methods can dictate use of additional protective safety equipment, such as impermeable aprons, etc., to minimize exposure.

Engineering Controls (Ventilation etc.)

Use only with adequate ventilation to prevent buildup of vapors. Do not use in areas where vapors can accumulate and concentrate, such as basements, bathrooms or small enclosed areas.

Whenever possible, use outdoors in an open air area. If using indoors open all windows and doors and maintain a cross ventilation of moving fresh air across the work area. If strong odor is noticed or you experience slight dizziness, headache, nausea or eye-watering -- STOP -- ventilation is inadequate. Leave area immediately and move to fresh air.

Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Work/Hygienic/Maintenance Practices

A source of clean water should be available in the work area for flushing of the eyes and skin.

Wash hands thoroughly after use.
Do not eat, drink, or smoke in the work area.

Before reuse, thoroughly clean any clothing or protective equipment that has been contaminated by prior use.

Discard any clothing or other protective equipment that cannot be decontaminated, such as gloves or shoes.

9. Physical and Chemical Properties

Physical States:	[ ] Gas [X] Liquid [ ] Solid
Melting Point:	No data.
Boiling Point:	No data.
Autoignition Pt:	No data.
Flash Pt:	NP
Explosive Limits:	LEL: No data. UEL: No data.
Specific Gravity (Water = 1):	9.75 - 10.08
Density:	9.948 LB/GL
Bulk density:	No data.
Vapor Pressure (vs. Air or mm Hg):	25 MM HG at 68.0 F (20.0 C)
Vapor Density (vs. Air = 1):	No data.
Evaporation Rate (vs Butyl Acetate=1):	> 1
Solubility in Water:	No data.
Percent Volatile:	97.0 %
VOC / Volume:	172.0000 G/L
Heat Value:	No data.
Particle Size:	No data.
Corrosion Rate:	No data.
pH:	10.0 - 10.5

Appearance and Odor

Clear to white color.

10. Stability and Reactivity

Stability: Unstable [ ] Stable [X]

Conditions To Avoid - Instability

No data available.

Incompatibility - Materials To Avoid

Incompatible with strong oxidizing agents; bases; strong caustics; strong acids; oxygen; nitrogen peroxide; reactive metals such as aluminum and magnesium; sodium; potassium; and nitric acid.

Hazardous Decomposition Or Byproducts

Decomposition may produce carbon monoxide and carbon dioxide, hydrogen chloride, chlorine gas, and small quantities of phosgene.

Hazardous Polymerization: Will occur [ ] Will not occur [X]

Conditions To Avoid - Hazardous Polymerization

No data available.

11. Toxicological Information

This product has not been tested as a whole. Information below will be for individual ingredients.

Methylene Chloride:
ACUTE TOXICITY:
LC50 Rat inhalation 52 mg/L 4 hrs
LD50 Rat oral 985-1600 mg/kg
SKIN CORROSION / IRRITATION:
810 mg/24 hr skin rabbit - severe
100 mg/24 hr skin rabbit - moderate
SERIOUS EYE DAMAGE / IRRITATION:
162 mg eyes rabbit - moderate
10 mg eyes rabbit - mild
500 mg/24 hr eyes rabbit - mild
RESPIRATORY OR SKIN SENSITIZATION: Not a respiratory or skin sensitizer.
ASPIRATION HAZARD: Methylene chloride does present an aspiration hazard.
MUTAGENIC DATA: Positive results have been observed in the Ames test. In mammalian systems, responses have generally been negative.
IMMUNOTOXICITY: A study found there was no evidence of harm to the immune system of laboratory animals or reduced ability to combat disease.
NEUROTOXICITY: Tests in rats indicate no significant neurotoxic effects after exposure to concentrations up to 2,000 ppm for 90 days. No neurotoxic effects have been observed in humans at typical occupational exposure levels.
DEVELOPMENTAL/REPRODUCTIVE: No significant developmental effects were observed in female rats and mice exposed to 1,250 ppm during gestation. A similar result was observed in rats exposed to 4,500 ppm before and during gestation. A two-generation inhalation study showed no adverse reproductive effects in rats exposed to as much as 1,500 ppm for 14 weeks.
CARCINOGEN STATUS: Methylene chloride is carcinogenic in experimental animals at a relatively high dose, by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) that are not considered relevant to worker exposure. Available epidemiological studies do not confirm an increased risk of cancer in humans. Available evidence suggests that this material is not likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure.

Methanol:
ACUTE TOXICITY:
LD50 Rat oral 5628 mg/kg
LC50 Rat inhalation 64000 ppm/4 hr
LC50 Rat inhalation 87.5 mg/L/6 hr
LD50 Mouse oral 7300 mg/kg
SKIN CORROSION / IRRITATION: LD50 Rabbit dermal 15,800 mg/kg bw
SERIOUS EYE DAMAGE / IRRITATION: Methanol is a mild to moderate eye irritant.

RESPIRATORY OR SKIN SENSITIZATION: Not a respiratory or skin sensitizer.
ASPIRATION HAZARD: Methanol presents an aspiration hazard.
MUTAGENIC DATA: No data.
IMMUNOTOXICITY: No data.
NEUROTOXICITY: Overexposure to methanol has been suggested as causing central nervous system damage in laboratory animals.
DEVELOPMENTAL/REPRODUCTIVE: The inhalation of methanol by pregnant rodents throughout the period of embryogenesis induces a wide range of concentration-dependent teratogenic and embryolethal effects. Methanol has caused birth defects in laboratory animals, but only when inhaled at extremely high vapor concentrations. The relevance of this finding to humans is uncertain.
CARCINOGEN STATUS: There is no evidence from animal studies to suggest methanol is a carcinogen.

Stoddard Solvent:
ACUTE TOXICITY:
LD50 Rat oral >34,600 mg/kg
LC50 Rat Inhalation >21,400 mg/m3 / 4 hrs
LD50 Rabbit skin 15,400 mg/kg
SKIN CORROSION / IRRITATION: Primary dermal studies (4 hr exposure) in rabbits utilizing mineral spirits containing less than 2% aromatics resulted in slight to moderate skin irritation.
SERIOUS EYE DAMAGE / IRRITATION: In a 15 minute inhalation period, eye irritation, characterized as a slight dryness, was reported in one of six volunteers (ages 22-61 years) at 150 ppm (860 mg/cu m). At 470 ppm (2700 mg/cu m), ocular irritation was reported by all six volunteers.
RESPIRATORY OR SKIN SENSITIZATION: Skin sensitization was not evident in animal studies.
ASPIRATION HAZARD: This material presents an aspiration hazard.
MUTAGENIC DATA: No data.
IMMUNOTOXICITY: No data.
NEUROTOXICITY: Repeated exposure to elevated concentrations of hydrocarbon solvents can produce a variety of transient CNS effects (e.g., dizziness, headache, narcosis, etc.)
DEVELOPMENTAL/REPRODUCTIVE: There were no treatment-related effects on pregnancy rate, mortality or gross post mortem observations in animal studies utilizing mineral spirits containing less than 2% aromatics. In vivo and in vitro studies on mineral spirits containing up to 22% aromatics indicate that these products are not genotoxic.
CARCINOGEN STATUS: There is inadequate evidence for the carcinogenicity of petroleum solvents in humans. Animal studies have indicated that there may be some evidence of carcinogenic activity in male rats but no evidence in female rats. A low carcinogenic potential is suggested by a lack of genotoxic potential identified in in vivo and in vitro genetic toxicity tests.
OTHER ADVERSE EFFECTS: Chronic effects of ingestion and subsequent aspiration of mineral spirits into the lungs may cause pneumatocele (lung cavity) formation and chronic lung dysfunction.

Chronic Toxicological Effects

Reports have associated repeated and prolonged occupational overexposure to solvents with irreversible brain and nervous system damage.

Carcinogenicity/Other Information

No data available.

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. Dichloromethane {Methylene chloride}	75-09-2	Possible	2B	A3	Yes

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
2. Methanol {Methyl alcohol; Carbinol; Wood alcohol}	67-56-1	n.a.	n.a.	n.a.	n.a.
3. Stoddard solvent {Mineral spirits; Aliphatic Petroleum Distillates; White spirits}	8052-41-3	n.a.	n.a.	n.a.	n.a.

12. Ecological Information

No information available for this product as a whole.

Methylene Chloride:
TOXICITY: LC50 310 mg/L 96 hrs (static) Fathead Minnow; LC50 220 mg/L 96 hrs (static) Bluegill Sunfish; LC50 256 mg/L 96 hrs Mysid Shrimp
PERSISTENCE AND DEGRADABILITY: If released to air, a vapor pressure of 435 mm Hg at 25 deg C indicates dichloromethane will exist solely as a vapor in the ambient atmosphere. This material released to the atmosphere will degrade by reaction with hydroxyl radicals with a half-life of several months. It is not subject to direct photooxidation. On land is expected to evaporate rapidly into the atmosphere due to its high vapor pressure. it is poorly adsorbed to soil and can leach into the groundwater. Calculated Adsorption Coefficient (log KOC) is 1. This material is subject to rapid evaporation, with estimated evaporative half-lives ranging from 3 to 5.6 hours under moderate mixing conditions. This material has a negligible rate of hydrolysis. Biodegredation may occur in groundwater, but will be very slow compared with evaporation.
BIOACCUMULATIVE POTENTIAL: Bioconcentration potential in aquatic organisms is low with BCF of 2.
MOBILITY IN SOIL: If released to soil, dichloromethane is expected to have very high mobility based upon an estimated Koc of 24.
OTHER ADVERSE EFFECTS: No data.

Methanol:
TOXICITY: Methanol is of low toxicity to aquatic organisms. LC50 Pimephales promelas (fathead minnows) 29.4 g/L/96 hr, (28-29 days old), confidence limit= 28.5-30.4; Test conditions: Water temp= 25 deg C, dissolved oxygen= 7.3 mg/L, water hardness= 43.5 mg/l calcium carbonate, alkalinity= 46.6 calcium carbonate, tank volume= 6.3 L, additions= 5.71 V/D, pH= 7.66 (0.03).
PERSISTENCE AND DEGRADABILITY: If released to the atmosphere, a vapor pressure of 127 mm Hg at 25 deg C indicates that methanol will exist solely in the vapor phase. Vapor phase methanol is degraded in the atmosphere by reaction with photochemically-produced hydroxyl radicals; the half-life for this reaction in air is estimated to be 17 days. Volatilization from moist soil surfaces is expected to be an important fate process based upon a Henry's Law constant of 4.55X10-6 atm-cu m/mole. Methanol may also volatilize from dry soils based upon it vapor pressure. Biodegradation of methanol in soils is expected to occur rapidly based on half-lives in a sandy silt loam from Texas and a sandy loam from Mississippi of 1 and 3.2 days, respectively. If released into water, methanol is not expected to adsorb to suspended solids and sediment based upon the estimated Koc. Volatilization from water surfaces is expected to be an important fate process based upon this compound's Henry's Law constant. Estimated volatilization half-lives for a model river and model lake are 3 and 35 days, respectively. Biodegradation is expected to occur in natural waters since methanol is degraded quickly in soils and was biodegraded rapidly in various aqueous screening tests using sewage seed or activated sludge. Hydrolysis of methanol and photolysis in sunlit surface waters are not expected since methanol lacks functional groups that are susceptible to hydrolysis or photolysis under environmental conditions.
BIOACCUMULATIVE POTENTIAL: BCF values of less than 10, measured in fish suggests bioconcentration in aquatic organisms is low.
MOBILITY IN SOIL: If released to soil, methanol is expected to have very high mobility based upon an estimated Koc of 1.

Stoddard Solvent:
TOXICITY: This mixture contains components that are potentially toxic to freshwater and saltwater ecosystems. This material may be harmful to aquatic organisms and may cause long term adverse effects in the aquatic

environment.
PERSISTENCE AND DEGRADABILITY: This material will normally float on water. Components will evaporate rapidly.
BIOACCUMULATIVE POTENTIAL: The octanol-water partition coefficient for this material is expected to be in the range of 2.1 to 5.
MOBILITY IN SOIL: No data.
OTHER ADVERSE EFFECTS: No data.

13. Disposal Considerations

Waste Disposal Method

Dispose in accordance with applicable local, state, and federal regulations.

Keep out of bodies of water.

14. Transport Information

LAND TRANSPORT (US DOT)

DOT Proper Shipping Name Paint Related Material
DOT Hazard Class: 8
DOT Hazard Label: CORROSIVE
UN/NA Number: UN3066
Packing Group: II

LAND TRANSPORT (Canadian TDG)

UN Number: 3066
Packing Group: II

Additional Transport Information

For D.O.T. information, contact W.M. Barr Technical Services at 1-800-398-3892.

The supplier may apply one of the following exceptions: Combustible Liquid, Consumer Commodity, Limited Quantity, Viscous Liquid, Does Not Sustain Combustion, or others, as allowed under 49CFR Hazmat Regulations. Please consult 49CFR Subchapter C to ensure that subsequent shipments comply with these exceptions.

Limited quantities of 1 liter or less may be allowed depending on the mode of transportation. Refer to 49 CFR, IMDG Code or IATA Dangerous Goods Regulations for this information.

15. Regulatory Information

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Dichloromethane {Methylene chloride}	75-09-2	No	Yes 1000 LB	Yes	Yes
2. Methanol {Methyl alcohol; Carbinol; Wood alcohol}	67-56-1	No	Yes 5000 LB	Yes	No
3. Stoddard solvent {Mineral spirits; Aliphatic Petroleum Distillates; White spirits}	8052-41-3	No	No	No	

US EPA CAA, CWA, TSCA

Hazardous Components (Chemical Name)	CAS #	EPA CAA	EPA CWA NPDES	EPA TSCA	CA PROP 65
1. Dichloromethane {Methylene chloride}	75-09-2	HAP	Yes	Inventory, 8A CAIR	Yes
2. Methanol {Methyl alcohol; Carbinol; Wood alcohol}	67-56-1	HAP		Inventory	
3. Stoddard solvent {Mineral spirits; Aliphatic Petroleum Distillates; White spirits}	8052-41-3	No		Inventory	

SARA (Superfund Amendments and Reauthorization Act of 1986) Lists:

Sec.302: EPA SARA Title III Section 302 Extremely Hazardous Chemical with TPQ. * indicates 10000 LB TPQ if not volatile.

Sec.304: EPA SARA Title III Section 304: CERCLA Reportable + Sec.302 with Reportable Quantity. ** indicates statutory RQ.

Sec.313: EPA SARA Title III Section 313 Toxic Release Inventory. Note: -Cat indicates a member of a chemical category.

Sec.110: EPA SARA 110 Superfund Site Priority Contaminant List

TSCA (Toxic Substances Control Act) Lists:

Inventory: Chemical Listed in the TSCA Inventory.

5A(2): Chemical Subject to Significant New Rules (SNURS)

6A: Commercial Chemical Control Rules

8A: Toxic Substances Subject To Information Rules on Production

8A CAIR: Comprehensive Assessment Information Rules - (CAIR)

8A PAIR: Preliminary Assessment Information Rules - (PAIR)

8C: Records of Allegations of Significant Adverse Reactions

8D: Health and Safety Data Reporting Rules

8D TERM: Health and Safety Data Reporting Rule Terminations

12(b): Notice of Export

Other Important Lists:

CWA NPDES: EPA Clean Water Act NPDES Permit Chemical

CAA HAP: EPA Clean Air Act Hazardous Air Pollutant

CAA ODC: EPA Clean Air Act Ozone Depleting Chemical (1=CFC, 2=HCFC)

CA PROP 65: California Proposition 65

International Regulatory Lists:

EPA Hazard Categories:

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:

[X] Yes [ ] No Acute (immediate) Health Hazard
[X] Yes [ ] No Chronic (delayed) Health Hazard
[ ] Yes [X] No Fire Hazard
[ ] Yes [X] No Sudden Release of Pressure Hazard
[ ] Yes [X] No Reactive Hazard

Regulatory Information

Methylene Chloride WHMIS Classification: D1B, D2A, D2B
Methylene Chloride WHMIS Health Effects Criteria Met by this Chemical:
D2B - Eye irritation - toxic - other
D2B - Skin irritation - toxic - other
D2A - Carcinogenicity - very toxic - other
D2B - Mutagenicity - toxic - other
D1B - TDG class 6.1 packing group III - toxic - immediate
Methylene Chloride WHMIS Ingredient Disclosure List: Included for disclosure at 0.1% or greater.

Methanol CAS Registry Number: 67-56-1
Methanol WHMIS Classification: B2, D1B, D2A, D2B
Methanol WHMIS Health Effects Criteria Met by this Chemical:
D1B - TDG class 6.1 packing group unknown - toxic - immediate
D2A - Teratogenicity and embryotoxicity - very toxic - other
D2B - Eye irritation - toxic - other
Methanol WHMIS Ingredient Disclosure List: Included for disclosure at 1% or greater. Meets criteria for disclosure at 0.1%.

Stoddard Solvent CAS# 8052-41-3
WHMIS Classification:
B3 - Flammable and combustible material - Combustible liquid
D2B - Poisonous and infectious material - Other effects - Toxic
WHMIS Health Effects Criteria Met by this Chemical: D2B - Skin irritation - toxic - other
WHMIS Ingredient Disclosure List: Included for disclosure at 1% or greater.

This product has been classified according to the hazard criteria of the Controlled Products Regulations.

Concentrations reported in section 2 are weight/weight.

Ingredients disclosed in section 2 are on Canadian DSL.

16. Other Information

Company Policy or Disclaimer

The information contained herein is presented in good faith and believed to be accurate as of the effective date shown above. This information is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. Any use of this data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.

SAFETY DATA SHEET

Air

Section 1. Identification

GHS product identifier : Air

Chemical name : air

Other means of identification : Compressed Air ; Breathing Quality Air ; synthetic air, reconstituted air, medical air, medical air USP.

Product use : Synthetic/Analytical chemistry.

Synonym : Compressed Air ; Breathing Quality Air ; synthetic air, reconstituted air, medical air, medical air USP.

SDS # : 001002

Supplier's details : Airgas USA, LLC and its affiliates
259 North Radnor-Chester Road
Suite 100
Radnor, PA 19087-5283
1-610-687-5253

Emergency telephone number (with hours of operation) : 1-866-734-3438

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : GASES UNDER PRESSURE - Compressed gas

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : Contains gas under pressure; may explode if heated.
May support combustion.

Precautionary statements

General : Read and follow all Safety Data Sheets (SDS'S) before use. Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand. Close valve after each use and when empty. Use equipment rated for cylinder pressure. Do not open valve until connected to equipment prepared for use. Use a back flow preventative device in the piping. Use only equipment of compatible materials of construction.

Prevention : Use and store only outdoors or in a well ventilated place.

Response : Not applicable.

Storage : Protect from sunlight. Protect from sunlight when ambient temperature exceeds 52°C/125°F. Store in a well-ventilated place.

Disposal : Not applicable.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Chemical name : air

Other means of identification : Compressed Air ; Breathing Quality Air ; synthetic air, reconstituted air, medical air, medical air USP.

CAS number/other identifiers

CAS number : Not applicable.

Product code : 001002

Ingredient name	%	CAS number
Nitrogen oxygen	76.5 - 80.5 19.5 - 23.5	7727-37-9 7782-44-7

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Inhalation : "None expected"

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : As this product is a gas, refer to the inhalation section.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Contact with rapidly expanding gas may cause burns or frostbite.

Inhalation : "None expected"

Skin contact : Contact with rapidly expanding gas may cause burns or frostbite.

Frostbite : Try to warm up the frozen tissues and seek medical attention.

Ingestion : As this product is a gas, refer to the inhalation section.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Section 4. First aid measures

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : Contains gas under pressure. In a fire or if heated, a pressure increase will occur and the container may burst or explode.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
nitrogen oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Contact supplier immediately for specialist advice. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Avoid breathing gas. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Ensure emergency procedures to deal with accidental gas releases are in place to avoid contamination of the environment. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Immediately contact emergency personnel. Stop leak if without risk.

Large spill : Immediately contact emergency personnel. Stop leak if without risk. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Contains gas under pressure. Avoid contact with eyes, skin and clothing. Avoid breathing gas. Empty containers retain product residue and can be hazardous. Do not puncture or incinerate container. Use equipment rated for cylinder pressure. Close valve after each use and when empty. Protect cylinders from physical damage; do not drag, roll, slide, or drop. Use a suitable hand truck for cylinder movement.

Section 7. Handling and storage

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Keep container tightly closed and sealed until ready for use. Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Cylinder temperatures should not exceed 52 °C (125 °F).

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

None.

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Section 8. Exposure controls/personal protection

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Gas.

Color : Colorless.

Boiling/condensation point : -194.3°C (-317.7°F)

Melting/freezing point : -216.2°C (-357.2°F)

Critical temperature : Lowest known value: -146.95°C (-232.5°F) (nitrogen).

Odor : Odorless.

Odor threshold : Not available.

pH : Not available.

Flash point : Not available.

Burning time : Not applicable.

Burning rate : Not applicable.

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Highest known value: 1.1 (Air = 1) (oxygen). Weighted average: 1 (Air = 1)

Gas Density (lb/ft ^{3}) : 0.0749

Relative density : Not applicable.

Solubility : Not available.

Solubility in water : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

SADT : Not available.

Viscosity : Not applicable.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Section 10. Stability and reactivity

Incompatibility with various substances : Not considered to be reactive according to our database.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Not available.

Irritation/Corrosion

Not available.

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Contact with rapidly expanding gas may cause burns or frostbite.

Inhalation : “None expected”

Skin contact : Contact with rapidly expanding gas may cause burns or frostbite.

Ingestion : As this product is a gas, refer to the inhalation section.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Section 11. Toxicological information

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Not available.

Persistence and degradability

Not available.

Bioaccumulative potential

Not available.

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Air

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Empty Airgas-owned pressure vessels should be returned to Airgas. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Section 14. Transport information

	DOT	TDG	Mexico	IMDG	IATA
UN number	UN1002	UN1002	UN1002	UN1002	UN1002
UN proper shipping name	Air, compressed	Air, compressed	Air, compressed	Air, compressed (nitrogen, oxygen)	Air, compressed (nitrogen, oxygen)
Transport hazard class(es)	2.2 	2.2 	2.2 	2.2 	2.2 
Packing group	-	-	-	-	-
Environment	No.	No.	No.	No.	No.
Additional information	-	**Explosive Limit and Limited Quantity Index** 0.125 **Passenger Carrying Road or Rail Index** 75	-	-	-

"Refer to CFR 49 (or authority having jurisdiction) to determine the information required for shipment of the product."

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption**: All components are listed or exempted.
United States inventory (TSCA 8b): All components are listed or exempted.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Section 15. Regulatory information

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Sudden release of pressure

Composition/information on ingredients

No products were found.

State regulations

Massachusetts : The following components are listed: NITROGEN; OXYGEN (LIQUID)

New York : None of the components are listed.

New Jersey : The following components are listed: NITROGEN; OXYGEN

Pennsylvania : The following components are listed: NITROGEN; OXYGEN

Canada inventory : All components are listed or exempted.

International regulations

International lists : **Australia inventory (AICS)**: All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: Not determined.
Korea inventory: All components are listed or exempted.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.
Taiwan inventory (CSNN): Not determined.

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

Canada

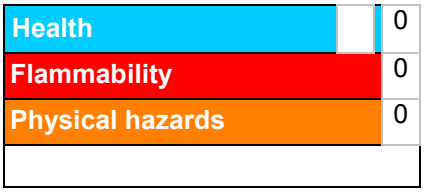
WHMIS (Canada) : Class A: Compressed gas.

CEPA Toxic substances: None of the components are listed.
Canadian ARET: None of the components are listed.
Canadian NPRI: None of the components are listed.
Alberta Designated Substances: None of the components are listed.
Ontario Designated Substances: None of the components are listed.
Quebec Designated Substances: None of the components are listed.

Section 16. Other information

Canada Label requirements : Class A: Compressed gas.

Hazardous Material Information System (U.S.A.)



Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Reprinted with permission from NFPA 704-2001, Identification of the Hazards of Materials for Emergency Response Copyright ©1997, National Fire Protection Association, Quincy, MA 02269. This reprinted material is not the complete and official position of the National Fire Protection Association, on the referenced subject which is represented only by the standard in its entirety.

Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

History

Date of printing : 10/14/2014.

Date of issue/Date of revision : 10/14/2014.

Date of previous issue : 9/22/2014.

Version : 0.03

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United NationsACGIH – American Conference of Governmental Industrial Hygienists
AIHA – American Industrial Hygiene Association
CAS – Chemical Abstract Services
CEPA – Canadian Environmental Protection Act
CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act (EPA)
CFR – United States Code of Federal Regulations
CPR – Controlled Products Regulations

Section 16. Other information

DSL – Domestic Substances List
GWP – Global Warming Potential
IARC – International Agency for Research on Cancer
ICAO – International Civil Aviation Organisation
Inh – Inhalation
LC – Lethal concentration
LD – Lethal dosage
NDSL – Non-Domestic Substances List
NIOSH – National Institute for Occupational Safety and Health
TDG – Canadian Transportation of Dangerous Goods Act and Regulations
TLV – Threshold Limit Value
TSCA – Toxic Substances Control Act
WEEL – Workplace Environmental Exposure Level
WHMIS – Canadian Workplace Hazardous Material Information System

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

SAFETY DATA SHEET

Carbon Dioxide

Section 1. Identification

GHS product identifier : Carbon Dioxide

Chemical name : Carbon dioxide

Other means of identification : Carbonic, Carbon Dioxide, Carbonic Anhydride, R744

Product use : Synthetic/Analytical chemistry.

Synonym : Carbonic, Carbon Dioxide, Carbonic Anhydride, R744

SDS # : 001013

Supplier's details : Airgas USA, LLC and its affiliates
259 North Radnor-Chester Road
Suite 100
Radnor, PA 19087-5283
1-610-687-5253

Emergency telephone number (with hours of operation) : 1-866-734-3438

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : GASES UNDER PRESSURE - Liquefied gas
Simple asphyxiant.

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : Contains gas under pressure; may explode if heated.
May cause frostbite.
May displace oxygen and cause rapid suffocation.
May increase respiration and heart rate.

Precautionary statements

General : Read and follow all Safety Data Sheets (SDS'S) before use. Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand. Close valve after each use and when empty. Use equipment rated for cylinder pressure. Do not open valve until connected to equipment prepared for use. Use a back flow preventative device in the piping. Use only equipment of compatible materials of construction. Always keep container in upright position.

Prevention : Use and store only outdoors or in a well ventilated place.

Response : Not applicable.

Storage : Protect from sunlight. Protect from sunlight when ambient temperature exceeds 52°C/125°F. Store in a well-ventilated place.

Disposal : Not applicable.

Section 2. Hazards identification

Hazards not otherwise classified : In addition to any other important health or physical hazards, this product may displace oxygen and cause rapid suffocation.
May cause frostbite.

Section 3. Composition/information on ingredients

Substance/mixture : Substance

Chemical name : Carbon dioxide

Other means of identification : Carbonic, Carbon Dioxide, Carbonic Anhydride, R744

CAS number/other identifiers

CAS number : 124-38-9

Product code : 001013

Ingredient name	%	CAS number
Carbon Dioxide	100	124-38-9

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : As this product is a gas, refer to the inhalation section.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Frostbite : Try to warm up the frozen tissues and seek medical attention.

Ingestion : As this product is a gas, refer to the inhalation section.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Section 4. First aid measures

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : Contains gas under pressure. In a fire or if heated, a pressure increase will occur and the container may burst or explode.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Contact supplier immediately for specialist advice. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Avoid breathing gas. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Ensure emergency procedures to deal with accidental gas releases are in place to avoid contamination of the environment. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Immediately contact emergency personnel. Stop leak if without risk.

Large spill : Immediately contact emergency personnel. Stop leak if without risk. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Contains gas under pressure. Avoid contact with eyes, skin and clothing. Avoid breathing gas. Empty containers retain product residue and can be hazardous. Do not puncture or incinerate container. Use equipment rated for cylinder pressure. Close valve after each use and when empty. Protect cylinders from physical damage; do not drag, roll, slide, or drop. Use a suitable hand truck for cylinder movement.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Keep container tightly closed and sealed until ready for use. Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Cylinder temperatures should not exceed 52 °C (125 °F).

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Carbon Dioxide	**ACGIH TLV (United States, 3/2012). Oxygen Depletion [Asphyxiant].** STEL: 54000 mg/m³ 15 minutes. STEL: 30000 ppm 15 minutes. TWA: 9000 mg/m³ 8 hours. TWA: 5000 ppm 8 hours. **NIOSH REL (United States, 1/2013).** STEL: 54000 mg/m³ 15 minutes. STEL: 30000 ppm 15 minutes. TWA: 9000 mg/m³ 10 hours. TWA: 5000 ppm 10 hours. **OSHA PEL (United States, 6/2010).** TWA: 9000 mg/m³ 8 hours. TWA: 5000 ppm 8 hours. **OSHA PEL 1989 (United States, 3/1989).** STEL: 54000 mg/m³ 15 minutes. STEL: 30000 ppm 15 minutes. TWA: 18000 mg/m³ 8 hours. TWA: 10000 ppm 8 hours.

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Section 8. Exposure controls/personal protection

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Gas. [Liquefied compressed gas.]

Color : Colorless.

Molecular weight : 44.01 g/mole

Molecular formula : C-O2

Melting/freezing point : Sublimation temperature: -79°C (-110.2 to °F)

Critical temperature : 30.85°C (87.5°F)

Odor : Odorless.

Odor threshold : Not available.

pH : Not available.

Flash point : [Product does not sustain combustion.]

Burning time : Not applicable.

Burning rate : Not applicable.

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : 830 (psig)

Vapor density : 1.53 (Air = 1) Liquid Density@BP: Solid density = 97.5 lb/ft3 (1562 kg/m3)

Specific Volume (ft ^{3}/lb) : 8.7719

Section 9. Physical and chemical properties

Gas Density (lb/ft ^{3}) : 0.114

Relative density : Not applicable.

Solubility : Not available.

Solubility in water : Not available.

Partition coefficient: n-octanol/water : 0.83

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

SADT : Not available.

Viscosity : Not applicable.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Not available.

Irritation/Corrosion

Not available.

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Section 11. Toxicological information

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : As this product is a gas, refer to the inhalation section.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Not available.

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Carbon Dioxide	0.83	-	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Empty Airgas-owned pressure vessels should be returned to Airgas. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Section 14. Transport information

	DOT	TDG	Mexico	IMDG	IATA
UN number	UN1013	UN1013	UN1013	UN1013	UN1013
UN proper shipping name	CARBON DIOXIDE	CARBON DIOXIDE	CARBON DIOXIDE	CARBON DIOXIDE	CARBON DIOXIDE
Transport hazard class(es)	2.2 	2.2 	2.2 	2.2 	2.2 
Packing group	-	-	-	-	-
Environment	No.	No.	No.	No.	No.
Additional information	**Limited quantity** Yes. **Packaging instruction** **Passenger aircraft** Quantity limitation: 75 kg **Cargo aircraft**	**Explosive Limit and Limited Quantity Index** 0.125 **Passenger Carrying Road or Rail Index** 75	-	-	**Passenger and Cargo Aircraft**Quantity limitation: 75 kg **Cargo Aircraft Only** Quantity limitation: 150 kg

Section 14. Transport information

	Quantity limitation: 150 kg				

"Refer to CFR 49 (or authority having jurisdiction) to determine the information required for shipment of the product."

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption**: This material is listed or exempted.
United States inventory (TSCA 8b): This material is listed or exempted.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Sudden release of pressure

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Carbon Dioxide	100	No.	Yes.	No.	Yes	No.

State regulations

Massachusetts : This material is listed.

New York : This material is not listed.

New Jersey : This material is listed.

Pennsylvania : This material is listed.

Canada inventory : This material is listed or exempted.

Section 15. Regulatory information

International regulations

International lists : **Australia inventory (AICS)**: This material is listed or exempted.
China inventory (IECSC): This material is listed or exempted.
Japan inventory: This material is listed or exempted.
Korea inventory: This material is listed or exempted.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): This material is listed or exempted.
Philippines inventory (PICCS): This material is listed or exempted.
Taiwan inventory (CSNN): Not determined.

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

Canada

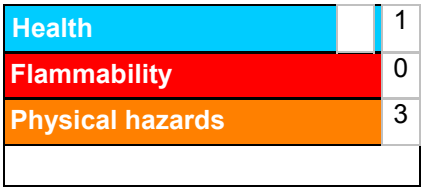
WHMIS (Canada) : Class A: Compressed gas.

CEPA Toxic substances: This material is listed.
Canadian ARET: This material is not listed.
Canadian NPRI: This material is not listed.
Alberta Designated Substances: This material is not listed.
Ontario Designated Substances: This material is not listed.
Quebec Designated Substances: This material is not listed.

Section 16. Other information

Canada Label requirements : Class A: Compressed gas.

Hazardous Material Information System (U.S.A.)



Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Section 16. Other information

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History

Date of printing : 5/26/2015.

Date of issue/Date of revision : 5/26/2015.

Date of previous issue : 5/21/2015.

Version : 1

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United NationsACGIH – American Conference of Governmental Industrial Hygienists
AIHA – American Industrial Hygiene Association
CAS – Chemical Abstract Services
CEPA – Canadian Environmental Protection Act
CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act (EPA)
CFR – United States Code of Federal Regulations
CPR – Controlled Products Regulations
DSL – Domestic Substances List
GWP – Global Warming Potential
IARC – International Agency for Research on Cancer
ICAO – International Civil Aviation Organisation
Inh – Inhalation
LC – Lethal concentration
LD – Lethal dosage
NDSL – Non-Domestic Substances List
NIOSH – National Institute for Occupational Safety and Health
TDG – Canadian Transportation of Dangerous Goods Act and Regulations
TLV – Threshold Limit Value
TSCA – Toxic Substances Control Act
WEEL – Workplace Environmental Exposure Level
WHMIS – Canadian Workplace Hazardous Material Information System

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader

Section 16. Other information

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

SAFETY DATA SHEET

Nonflammable Gas Mixture: Carbon Dioxide / Nitrogen / Oxygen

Section 1. Identification

GHS product identifier : Nonflammable Gas Mixture: Carbon Dioxide / Nitrogen / Oxygen

Other means of identification : Not available.

Product use : Synthetic/Analytical chemistry.

SDS # : 002061

Supplier's details : Airgas USA, LLC and its affiliates
259 North Radnor-Chester Road
Suite 100
Radnor, PA 19087-5283
1-610-687-5253

Emergency telephone number (with hours of operation) : 1-866-734-3438

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : GASES UNDER PRESSURE - Compressed gas

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : Contains gas under pressure; may explode if heated.
May displace oxygen and cause rapid suffocation.
May increase respiration and heart rate.

Precautionary statements

General : Read and follow all Safety Data Sheets (SDS'S) before use. Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand. Close valve after each use and when empty. Use equipment rated for cylinder pressure. Do not open valve until connected to equipment prepared for use. Use a back flow preventative device in the piping. Use only equipment of compatible materials of construction.

Prevention : Use and store only outdoors or in a well ventilated place.

Response : Not applicable.

Storage : Protect from sunlight. Protect from sunlight when ambient temperature exceeds 52°C/125°F. Store in a well-ventilated place.

Disposal : Not applicable.

Hazards not otherwise classified : In addition to any other important health or physical hazards, this product may displace oxygen and cause rapid suffocation.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

CAS number : Not applicable.

Product code : 002061

Ingredient name	%	CAS number
Carbon Dioxide	2 - 99	124-38-9
Nitrogen	1 - 98	7727-37-9
oxygen	1 - 19.5	7782-44-7

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : As this product is a gas, refer to the inhalation section.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Contact with rapidly expanding gas may cause burns or frostbite.

Inhalation : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : Contact with rapidly expanding gas may cause burns or frostbite.

Frostbite : Try to warm up the frozen tissues and seek medical attention.

Ingestion : As this product is a gas, refer to the inhalation section.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Section 4. First aid measures

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : Contains gas under pressure. In a fire or if heated, a pressure increase will occur and the container may burst or explode.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Contact supplier immediately for specialist advice. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Avoid breathing gas. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Ensure emergency procedures to deal with accidental gas releases are in place to avoid contamination of the environment. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Immediately contact emergency personnel. Stop leak if without risk.

Large spill : Immediately contact emergency personnel. Stop leak if without risk. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Contains gas under pressure. Avoid contact with eyes, skin and clothing. Avoid breathing gas. Empty containers retain product residue and can be hazardous. Do not puncture or incinerate container. Use equipment rated for cylinder pressure. Close valve after each use and when empty. Protect cylinders from physical damage; do not drag, roll, slide, or drop. Use a suitable hand truck for cylinder movement.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Keep container tightly closed and sealed until ready for use. Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Cylinder temperatures should not exceed 52 °C (125 °F).

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

None.

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Section 8. Exposure controls/personal protection

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Gas.

Color : Not available.

Melting/freezing point : -210.01°C (-346°F) This is based on data for the following ingredient: nitrogen. Weighted average: -211.4°C (-348.5°F)

Critical temperature : Lowest known value: -146.95°C (-232.5°F) (nitrogen).

Odor : Not available.

Odor threshold : Not available.

pH : Not available.

Flash point : Not available.

Burning time : Not applicable.

Burning rate : Not applicable.

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Highest known value: 1.5 (Air = 1) (Carbon dioxide). Weighted average: 1.22 (Air = 1)

Gas Density (lb/ft ^{3}) : Weighted average: 0.09

Relative density : Not applicable.

Solubility : Not available.

Solubility in water : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

SADT : Not available.

Viscosity : Not applicable.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatibility with various substances : Not considered to be reactive according to our database.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Not available.

Irritation/Corrosion

Not available.

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Section 11. Toxicological information

Potential acute health effects

Eye contact : Contact with rapidly expanding gas may cause burns or frostbite.

Inhalation : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : Contact with rapidly expanding gas may cause burns or frostbite.

Ingestion : As this product is a gas, refer to the inhalation section.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Not available.

Persistence and degradability

Not available.

Bioaccumulative potential

Section 12. Ecological information

Not available.

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Empty Airgas-owned pressure vessels should be returned to Airgas. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Section 14. Transport information

	DOT	TDG	Mexico	IMDG	IATA
UN number	UN1956	UN1956	UN1956	UN1956	UN1956
UN proper shipping name	COMPRESSED GAS, N.O.S. (Carbon dioxide, nitrogen)	COMPRESSED GAS, N.O.S. (Carbon dioxide, nitrogen)	COMPRESSED GAS, N.O.S. (Carbon dioxide, nitrogen)	COMPRESSED GAS, N.O.S. (Carbon dioxide, nitrogen)	COMPRESSED GAS, N.O.S. (Carbon dioxide, nitrogen)
Transport hazard class(es)	2.2 	2.2 	2.2 	2.2 	2.2 
Packing group	-	-	-	-	-
Environment	No.	No.	No.	No.	No.
Additional information	-	**Explosive Limit and Limited Quantity Index** 0.125 **Passenger Carrying Road or Rail Index** 75	-	-	-

"Refer to CFR 49 (or authority having jurisdiction) to determine the information required for shipment of the product."

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption**: All components are listed or exempted.
United States inventory (TSCA 8b): All components are listed or exempted.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Sudden release of pressure

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Carbon Dioxide	2-99	No.	Yes.	No.	No.	No.

State regulations

Massachusetts : The following components are listed: CARBON DIOXIDE; NITROGEN; OXYGEN (LIQUID)

New York : None of the components are listed.

New Jersey : The following components are listed: CARBON DIOXIDE; CARBONIC ACID GAS; NITROGEN; OXYGEN

Pennsylvania : The following components are listed: CARBON DIOXIDE; NITROGEN; OXYGEN

Canada inventory : All components are listed or exempted.

International regulations

International lists : **Australia inventory (AICS)**: All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: Not determined.
Korea inventory: All components are listed or exempted.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.
Taiwan inventory (CSNN): Not determined.

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Section 15. Regulatory information

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

Canada

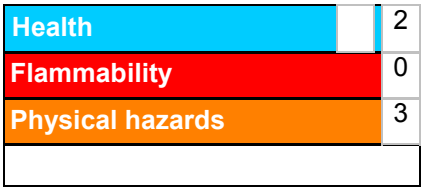
WHMIS (Canada) : Class A: Compressed gas.

CEPA Toxic substances: The following components are listed: Carbon dioxide
Canadian ARET: None of the components are listed.
Canadian NPRI: None of the components are listed.
Alberta Designated Substances: None of the components are listed.
Ontario Designated Substances: None of the components are listed.
Quebec Designated Substances: None of the components are listed.

Section 16. Other information

Canada Label requirements : Class A: Compressed gas.

Hazardous Material Information System (U.S.A.)



Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

History

Date of printing : 6/12/2015.

Date of issue/Date of revision : 5/27/2015.

Date of previous issue : 4/10/2015.

Section 16. Other information

Version : 1

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United NationsACGIH – American Conference of Governmental Industrial Hygienists
AIHA – American Industrial Hygiene Association
CAS – Chemical Abstract Services
CEPA – Canadian Environmental Protection Act
CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act (EPA)
CFR – United States Code of Federal Regulations
CPR – Controlled Products Regulations
DSL – Domestic Substances List
GWP – Global Warming Potential
IARC – International Agency for Research on Cancer
ICAO – International Civil Aviation Organisation
Inh – Inhalation
LC – Lethal concentration
LD – Lethal dosage
NDSL – Non-Domestic Substances List
NIOSH – National Institute for Occupational Safety and Health
TDG – Canadian Transportation of Dangerous Goods Act and Regulations
TLV – Threshold Limit Value
TSCA – Toxic Substances Control Act
WEEL – Workplace Environmental Exposure Level
WHMIS – Canadian Workplace Hazardous Material Information System

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader

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SAFETY DATA SHEET

Nonflammable Gas Mixture: Carbon Monoxide / Methane / Nitrogen / Oxygen

Section 1. Identification

GHS product identifier : Nonflammable Gas Mixture: Carbon Monoxide / Methane / Nitrogen / Oxygen

Other means of identification : Not available.

Product use : Synthetic/Analytical chemistry.

SDS # : 002185

Supplier's details : Airgas USA, LLC and its affiliates
259 North Radnor-Chester Road
Suite 100
Radnor, PA 19087-5283
1-610-687-5253

Emergency telephone number (with hours of operation) : 1-866-734-3438

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : GASES UNDER PRESSURE - Compressed gas
TOXIC TO REPRODUCTION (Fertility) - Category 1
TOXIC TO REPRODUCTION (Unborn child) - Category 1

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : Contains gas under pressure; may explode if heated.
May damage fertility or the unborn child.

Precautionary statements

General : Read and follow all Safety Data Sheets (SDS'S) before use. Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand. Close valve after each use and when empty. Use equipment rated for cylinder pressure. Do not open valve until connected to equipment prepared for use. Use a back flow preventative device in the piping. Use only equipment of compatible materials of construction.

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Use and store only outdoors or in a well ventilated place.

Response : IF exposed or concerned: Get medical attention.

Storage : Store locked up. Protect from sunlight. Protect from sunlight when ambient temperature exceeds 52°C/125°F. Store in a well-ventilated place.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

CAS number : Not applicable.

Product code : 002185

Ingredient name	%	CAS number
Nitrogen	72.5 - 79.5	7727-37-9
oxygen	19.5 - 23.5	7782-44-7
methane	0.1 - 3	74-82-8
carbon monoxide	0.1 - 0.9999	630-08-0

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : As this product is a gas, refer to the inhalation section.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Contact with rapidly expanding gas may cause burns or frostbite.

Inhalation : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : Contact with rapidly expanding gas may cause burns or frostbite.

Frostbite : Try to warm up the frozen tissues and seek medical attention.

Ingestion : As this product is a gas, refer to the inhalation section.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Section 4. First aid measures

Skin contact : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : Contains gas under pressure. In a fire or if heated, a pressure increase will occur and the container may burst or explode.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Contact supplier immediately for specialist advice. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Avoid breathing gas. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

Section 6. Accidental release measures

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Ensure emergency procedures to deal with accidental gas releases are in place to avoid contamination of the environment. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Immediately contact emergency personnel. Stop leak if without risk.

Large spill : Immediately contact emergency personnel. Stop leak if without risk. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Contains gas under pressure. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Avoid breathing gas. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Empty containers retain product residue and can be hazardous. Do not puncture or incinerate container. Use equipment rated for cylinder pressure. Close valve after each use and when empty. Protect cylinders from physical damage; do not drag, roll, slide, or drop. Use a suitable hand truck for cylinder movement.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Store locked up. Keep container tightly closed and sealed until ready for use. Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Cylinder temperatures should not exceed 52 °C (125 °F).

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
carbon monoxide	**ACGIH TLV (United States, 3/2012).** TWA: 29 mg/m³ 8 hours. TWA: 25 ppm 8 hours. **NIOSH REL (United States, 1/2013).** CEIL: 229 mg/m³ CEIL: 200 ppm TWA: 40 mg/m³ 10 hours. TWA: 35 ppm 10 hours. **OSHA PEL (United States, 6/2010).** TWA: 55 mg/m³ 8 hours.

Section 8. Exposure controls/personal protection

	TWA: 50 ppm 8 hours. **OSHA PEL 1989 (United States, 3/1989).** CEIL: 229 mg/m³ CEIL: 200 ppm TWA: 40 mg/m³ 8 hours. TWA: 35 ppm 8 hours.

Appropriate engineering controls : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Gas.

Color : Not available.

Melting/freezing point : -187.6°C (-305.7°F) This is based on data for the following ingredient: methane. Weighted average: -211.24°C (-348.2°F)

Critical temperature : Lowest known value: -146.95°C (-232.5°F) (nitrogen).

Section 9. Physical and chemical properties

Odor : Not available.

Odor threshold : Not available.

pH : Not available.

Flash point : [Product does not sustain combustion.]

Burning time : Not applicable.

Burning rate : Not applicable.

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Highest known value: 1.1 (Air = 1) (oxygen). Weighted average: 0.99 (Air = 1)

Gas Density (lb/ft ^{3}) : Weighted average: 0.08

Relative density : Not applicable.

Solubility : Not available.

Solubility in water : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

SADT : Not available.

Viscosity : Not applicable.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatibility with various substances : Extremely reactive or incompatible with the following materials: reducing materials and combustible materials.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
carbon monoxide	LC50 Inhalation Gas.	Rat	3760 ppm	1 hours

Irritation/Corrosion

Not available.

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
carbon monoxide	Category 1	Not determined	Not determined

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Contact with rapidly expanding gas may cause burns or frostbite.

Inhalation : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : Contact with rapidly expanding gas may cause burns or frostbite.

Ingestion : As this product is a gas, refer to the inhalation section.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Section 11. Toxicological information

Skin contact : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : May damage the unborn child.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : May damage fertility.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Not available.

Persistence and degradability

Not available.

Bioaccumulative potential

Not available.

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Section 12. Ecological information

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Empty Airgas-owned pressure vessels should be returned to Airgas. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Section 14. Transport information

	DOT	TDG	Mexico	IMDG	IATA
UN number	UN1956	UN1956	UN1956	UN1956	UN1956
UN proper shipping name	COMPRESSED GAS, N.O.S. (nitrogen, oxygen)	COMPRESSED GAS, N.O.S. (nitrogen, oxygen)	COMPRESSED GAS, N.O.S. (nitrogen, oxygen)	COMPRESSED GAS, N.O.S. (nitrogen, oxygen)	COMPRESSED GAS, N.O.S. (nitrogen, oxygen)
Transport hazard class(es)	2.2 	2.2 	2.2 	2.2 	2.2 
Packing group	-	-	-	-	-
Environment	No.	No.	No.	No.	No.
Additional information	-	**Explosive Limit and Limited Quantity Index** 0.125 **Passenger Carrying Road or Rail Index** 75	-	-	-

"Refer to CFR 49 (or authority having jurisdiction) to determine the information required for shipment of the product."

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption**: Not determined

United States inventory (TSCA 8b): All components are listed or exempted.

Clean Air Act (CAA) 112 regulated flammable substances: methane

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Sudden release of pressure
Delayed (chronic) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
carbon monoxide	0.1 - 0.9999	Yes.	Yes.	No.	Yes.	Yes.

State regulations

Massachusetts : The following components are listed: NITROGEN; OXYGEN (LIQUID); METHANE

New York : None of the components are listed.

New Jersey : The following components are listed: NITROGEN; OXYGEN; METHANE

Pennsylvania : The following components are listed: NITROGEN; OXYGEN; METHANE

California Prop. 65

WARNING: This product contains less than 1% of a chemical known to the State of California to cause birth defects or other reproductive harm.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
carbon monoxide	No.	Yes.	No.	No.

Canada inventory : All components are listed or exempted.

International regulations

Section 15. Regulatory information

International lists : **Australia inventory (AICS)**: All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: Not determined.
Korea inventory: All components are listed or exempted.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.
Taiwan inventory (CSNN): Not determined.

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

Canada

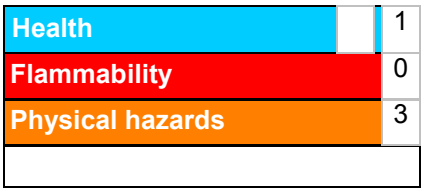
WHMIS (Canada) : Class A: Compressed gas.
Class D-2A: Material causing other toxic effects (Very toxic).

CEPA Toxic substances: The following components are listed: Methane
Canadian ARET: None of the components are listed.
Canadian NPRI: The following components are listed: Volatile organic compounds
Alberta Designated Substances: None of the components are listed.
Ontario Designated Substances: None of the components are listed.
Quebec Designated Substances: None of the components are listed.

Section 16. Other information

Canada Label requirements : Class A: Compressed gas.
Class D-2A: Material causing other toxic effects (Very toxic).

Hazardous Material Information System (U.S.A.)



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The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Section 16. Other information

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History

Date of printing : 2/25/2015.

Date of issue/Date of revision : 2/25/2015.

Date of previous issue : No previous validation.

Version : 0.01

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Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

MATERIAL SAFETY DATA SHEET

Applied Home Healthcare Equipment Inc.
31379 Lorain Road, North Olmsted, Ohio 44070-4730 U.S.A.
telephone: 001 440 716 9962 • toll-free 001 888 327 7301
fax: 001 440 716 9964
e-mail: med@applied-inc.com
web-site: www.applied-inc.com

PRODUCT NAME: CELLULOSE Wet Bands Revision Date: 7/20/04

SECTION ONE – PRODUCT DESCRIPTION

PRODUCT NAME: CELLULOSE Wet Bands
Part Number 1109-0014 (1,000)
Part Number 1109-0019 (2,500)
Part Number 1109-0020 (18,000)
Part Number 1109-0021 (11,500)
Part Number 1109-0022 (1,000)
Part Number 1109-0024 (500)
Part Number 1109-0034 (1,000 Perforated)
Part Number 1109-0035 (500 Perforated)
Part Number 1109-0037 (2,500 Perforated)
Part Number 1109-0040 (250)

EMERGENCY TELEPHONE NUMBER:

SECTION TWO – HAZARDOUS INGREDIENTS

Chemical Composition
A regenerated cellulose tube, made by the Viscose process supplied wet in a preservative solution. The preservative solution has the chemical composition:

PEG 200	7.00%
Para chloro meta cresol	0.17%
Hibitane	0.04%

Wet bands can be pigmented with small quantities of Toy grade pigments and/or titanium dioxide.

SECTION THREE – PHYSICAL DATA

Appearance A tubular material sold in flattened form.

Solubility in water Insoluble.

Density 0.0003 Kg/metre length/cm cross-section/mm t.

Storage and Handling
Precautions Should not be allowed to freeze as this leads to product deterioration. This is not a safety hazard however.

Materials of containment to be avoided
Unlined metallic drums as rusting can occur.

Hazardous Decomposition Products
None

MATERIAL SAFETY DATA SHEET

Applied Home Healthcare Equipment Inc.
31379 Lorain Road, North Olmsted, Ohio 44070-4730 U.S.A.
telephone: 001 440 716 9962 • toll-free 001 888 327 7301
fax: 001 440 716 9964
e-mail: med@applied-inc.com
web-site: www.applied-inc.com

PRODUCT NAME: CELLULOSE Wet Bands Revision Date: 7/20/04

Possible Hazardous Reactions
None

Protection to be worn
Gloves or Barrier creams to be worn. One of the preservatives P.C.M.C. can cause an allergic reaction in some people.

Measures in the event of a spillage
Flush away with water.

Disposal The solution can be flushed into a chemical drain. Viskrings can be put onto a municipal dump.

Plain and Printed
7% PEG 200 Polyethylene Glycol-200 refers to molecular size. Average Molecular Weight

190-210

Toxicity of this product is low, acute irritant effects being Nil, but moderately toxic if ingested. Chronic effects in both cases are slight.

Used as softening agent.

0./7% PCMC Para Chloro Meta Cresol – C H C
7 7 10

No skin irritation when used as a hand wash, provided concentrations do not exceed 0.5%
PCMC is used in many applications as a disinfectant active.
EEC Registered as approved preservative for cosmetic cream formulations up to 0.1%.

0.04% Hibitane Hibitance Diacetate (chemically known as Chlorhexidene Diacetate).
The material is unlikely to present any systemic toxic hazard in normal industrial use.

HANDLING OF SOLUTION

Normal hygiene should be observed – i.e. hands should be washed thoroughly after handling. A barrier cream or plastics gloves is recommended. In case of eye irritation, flush with water.

Manufacturer Disclaimer:
This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the users responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information. This product was manufactured for Applied Home Healthcare Equipment Inc.

MATERIAL SAFETY DATA SHEET

A40W51
11 00

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

A40W51

HMIS CODES

Health	2*
Flammability	2
Reactivity	0

PRODUCT NAME

CLASSIC 99* Interior/Exterior Semi-Gloss Oil Finish, Extra White

MANUFACTURER'S NAME

THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

EMERGENCY TELEPHONE NO.

(216) 566-2917

DATE OF PREPARATION

01-APR-07

INFORMATION TELEPHONE NO.

(216) 566-2902

Section 2 -- COMPOSITION/INFORMATION ON INGREDIENTS

% by WT	CAS No.	INGREDIENT			UNITS	VAPOR PRESSURE
31	64742-88-7	Mineral Spirits				
			ACGIH TLV	100	ppm	2 mm
			OSHA PEL	100	ppm	
5	64742-88-7	Mineral Spirits 140-Flash				
			ACGIH TLV	100	ppm	0.5 mm
			OSHA PEL	100	ppm	
0.1	100-41-4	Ethylbenzene				
			ACGIH TLV	100	ppm	7.1 mm
			ACGIH TLV	125	ppm STEL	
			OSHA PEL	100	ppm	
			OSHA PEL	125	ppm STEL	
5	14807-96-6	Talc				
			ACGIH TLV	2	mg/m3 as Resp. Dust	
			OSHA PEL	2	mg/m3 as Resp. Dust	
8	471-34-1	Calcium Carbonate				
			ACGIH TLV	10	mg/m3 as Dust	
			OSHA PEL	15	mg/m3 Total Dust	
			OSHA PEL	5	mg/m3 Respirable Fraction	
20	13463-67-7	Titanium Dioxide				
			ACGIH TLV	10	mg/m3 as Dust	
			OSHA PEL	10	mg/m3 Total Dust	
			OSHA PEL	5	mg/m3 Respirable Fraction	

Section 3 -- HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.

Continued on page 2

EFFECTS OF OVEREXPOSURE

EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.

Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

Section 4 -- FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water. Remove contaminated clothing and launder before re-use.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

Section 5 -- FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL
117 F PMCC	0.9	6.0

FLAMMABILITY CLASSIFICATION

Combustible, Flash above 99 and below 200 F

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode when exposed to extreme heat.

Application to hot surfaces requires special precautions.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

Section 6 -- ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.

Remove with inert absorbent.

Continued on page 3

Section 7 -- HANDLING AND STORAGE

STORAGE CATEGORY

DOL Storage Class II

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Contents are COMBUSTIBLE. Keep away from heat and open flame.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

Removal of old paint by sanding, scraping or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or other adverse health effects, especially in children or pregnant women. Controlling exposure to lead or other hazardous substances requires the use of proper protective equipment, such as a properly fitted respirator (NIOSH approved) and proper containment and cleanup. For more information, call the National Lead Information Center at 1-800-424-LEAD (in US) or contact your local health authority.

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PRECAUTIONS

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

Continued on page 4

Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	9.85 lb/gal	1180 g/l
SPECIFIC GRAVITY	1.19	
BOILING POINT	300 - 416 F	148 - 213 C
MELTING POINT	Not Available	
VOLATILE VOLUME	57 %	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

3.70 lb/gal	443 g/l	Less Water and Federally Exempt Solvents
3.70 lb/gal	443 g/l	Emitted VOC

Section 10 -- STABILITY AND REACTIVITY

STABILITY -- Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

Section 11 -- TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

Ethylbenzene is classified by IARC as possibly carcinogenic to humans (2B) based on inadequate evidence in humans and sufficient evidence in laboratory animals. Lifetime inhalation exposure of rats and mice to high ethylbenzene concentrations resulted in increases in certain types of cancer, including kidney tumors in rats and lung and liver tumors in mice. These effects were not observed in animals exposed to lower concentrations. There is no evidence that ethylbenzene causes cancer in humans.

Prolonged overexposure to solvent ingredients in Section 2 may cause adverse effects to the liver and urinary systems.

Rats exposed to titanium dioxide dust at 250 mg./m3 developed lung cancer, however, such exposure levels are not attainable in the workplace.

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

TOXICOLOGY DATA

Continued on page 5

CAS No.	Ingredient Name				
64742-88-7	Mineral Spirits				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
64742-88-7	Mineral Spirits 140-Flash				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
100-41-4	Ethylbenzene				
		LC50	RAT	4HR	Not Available
		LD50	RAT		3500 mg/kg
14807-96-6	Talc				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
471-34-1	Calcium Carbonate				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
13463-67-7	Titanium Dioxide				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

Section 12 -- ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

Section 13 -- DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

Continued on page 6

Section 14 -- TRANSPORT INFORMATION

US Ground (DOT)
May be Classed as a Combustible Liquid for U.S. Ground.
UN1263, PAINT, 3, PG III, (ERG#128)

DOT (Dept of Transportation) Hazardous Substances & Reportable Quantities
Xylenes (isomers and mixture) 100 lb RQ

Bulk Containers may be Shipped as (check reportable quantities):
UN1263, PAINT, COMBUSTIBLE LIQUID, PG III, (ERG#128)

Canada (TDG)
May be Classed as a Combustible Liquid for Canadian Ground.
UN1263, PAINT, CLASS 3, PG III, (ERG#128)

IMO
UN1263, PAINT, CLASS 3, PG III, (47 C c.c.), EmS F-E, S-E

Section 15 -- REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
100-41-4	Ethylbenzene	0.1	

CALIFORNIA PROPOSITION 65
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION
All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

Section 16 -- OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

Syngenta Crop Protection, Inc.
Post Office Box 18300
Greensboro, NC 27419

In Case of Emergency, Call
1-800-888-8372

1. PRODUCT IDENTIFICATION

Product Name: **DEMAND CS** Product No.: A12690A

EPA Signal Word: Caution

Active Ingredient(%): Lambda-Cyhalothrin (9.7%) CAS No.: 91465-08-6

Chemical Name: [1a(S*),3a(Z)]-cyano(3-phenoxyphenyl)methyl-3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropanecarboxylate

Chemical Class: A pyrethroid insecticide

EPA Registration Number(s): 100-1066 **Section(s) Revised: 3, 12**

2. HAZARDS IDENTIFICATION

Health and Environmental

May cause skin irritation. May cause sensitization by skin contact. Vapors may cause drowsiness and dizziness. May cause temporary itching, tingling, burning or numbness of exposed skin, called paresthesia.

Hazardous Decomposition Products

May decompose at high temperatures forming toxic gases.

Physical Properties

Appearance: Off-white liquid

Odor: Slight odor/typical aromatic solvent

Unusual Fire, Explosion and Reactivity Hazards

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Material	OSHA PEL	ACGIH TLV	Other	NTP/IARC/OSHA Carcinogen
Cumene (< 1%)	50 ppm TWA (skin)	50 ppm TWA	Not Established	No
Petroleum Solvent	Not Established	Not Established	100 mg/m³ (19 ppm) TWA *	No
Propylene Glycol	Not Established	Not Established	50 ppm TWA AIHA WEEL ****	No
1,2,4-Trimethylbenzene (<= 2.5%)	Not Established	25 ppm TWA	25 ppm TWA **	No
Xylene (<= 1%)	100 ppm TWA	100 ppm TWA; 150 ppm STEL	100 ppm TWA **	IARC Group 3
Lambda-Cyhalothrin (9.7%)	Not Established	Not Established	0.04 mg/m³ TWA (skin) ***	No

* recommended by manufacturer

** recommended by NIOSH

*** Syngenta Occupational Exposure Limit (OEL)

**** Recommended by AIHA (American Industrial Hygiene Association)

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.
Syngenta Hazard Category: C, S

4. FIRST AID MEASURES

Have the product container, label or Material Safety Data Sheet with you when calling Syngenta (800-888-8372), a poison contol center or doctor, or going for treatment.

Ingestion:	If swallowed: Call Syngenta (800-888-8372), a poison control center or doctor immediately for treatment advice. Do not give any liquid to the person. Do not induce vomiting unless told to do so after calling 800-888-8372 or by a poison control center or doctor. Do not give anything by mouth to an unconscious person.
Eye Contact:	If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Call Syngenta (800-888-8372), a poison control center or doctor for treatment advice.
Skin Contact:	If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call Syngenta (800-888-8372), a poison control center or doctor for treatment advice.
Inhalation:	If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call Syngenta (800-888-8372), a poison control center or doctor for further treatment advice.

Notes to Physician

There is no specific antidote if this product is ingested.

Treat symptomatically.

Persons suffering a temporary allergic reaction may respond to treatment with antihistamines or steroid creams and/or systemic steroids.

Skin contact paresthesia effects (itching, tingling, burning or numbness) are transient, lasting up to 24 hours. Treat symptomatically.

Contains petroleum distillate - vomiting may cause aspiration pneumonia.

Medical Condition Likely to be Aggravated by Exposure

None known.

5. FIRE FIGHTING MEASURES

Fire and Explosion

Flash Point (Test Method):	> 212°F (Setaflash)	
Flammable Limits (% in Air):	Lower: Not Applicable	Upper: Not Applicable
Autoignition Temperature:	Not Available	
Flammability:	Not Applicable	

Unusual Fire, Explosion and Reactivity Hazards

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

In Case of Fire

Use dry chemical, foam or CO2 extinguishing media. Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent use of contaminated buildings, area, and equipment until decontaminated. Water runoff can cause environmental damage. If water is used to fight fire, dike and collect runoff.

6. ACCIDENTAL RELEASE MEASURES

In Case of Spill or Leak

Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and

drainage systems or any body of water. Clean up spills immediately, observing precautions in Protective Equipment Section. Cover entire spill with absorbing material and place into compatible disposal container. Scrub area with hard water detergent (e.g. commercial products such as Tide, Joy, Spic and Span). Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposition.

7. HANDLING AND STORAGE

Store the material in a well-ventilated, secure area out of reach of children and domestic animals. Do not store food, beverages or tobacco products in the storage area. Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION, PACKAGING AND USE OF THIS PRODUCT.

FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.

Ingestion:	Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.
Eye Contact:	Where eye contact is likely, use chemical splash goggles.
Skin Contact:	Where contact is likely, wear chemical-resistant (such as nitrile or butyl) gloves, coveralls, socks and chemical-resistant footwear. For overhead exposure, wear chemical-resistant headgear. Stringent housekeeping measures are necessary to prevent translocation of the material from contaminated work surfaces to uncontaminated surfaces (railings, doors, etc.). Unprotected contact with such translocated material can result in paresthesia effects (see Section 11).
Inhalation:	A respirator is not normally required when handling this substance. Use effective engineering controls to comply with occupational exposure limits. In case of emergency spills, use a NIOSH approved respirator with any R, P or HE filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Off-white liquid
Odor:	Slight odor/typical aromatic solvent
Melting Point:	Not Applicable
Boiling Point:	212 °F
Specific Gravity/Density:	1.04 @ 68°F (20°C)
pH:	7.3 (1% w/w dilution in deionized water)

Solubility in H2O

Lambda-Cyhalothrin : 0.004mg/l

Vapor Pressure

Lambda-Cyhalothrin : 1.5 x 10(-9) mmHg @ 68°F (20°C)

10. STABILITY AND REACTIVITY

Stability:	Stable under normal use and storage conditions.
Hazardous Polymerization:	Will not occur.
Conditions to Avoid:	None known.
Materials to Avoid:	None known.
Hazardous Decomposition Products:	May decompose at high temperatures forming toxic gases.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity/Irritation Studies (Finished Product)

Ingestion:	Practically Non-Toxic	
	Oral (LD50 Rat) :	> 5,000 mg/kg body weight
Dermal:	Slightly Toxic	
	Dermal (LD50 Rat) :	> 2,000 mg/kg body weight
Inhalation:	Practically Non-Toxic	
	Inhalation (LC50 Rat) :	> 4.62 mg/l air - 4 hours
Eye Contact:	Non-Irritating (Rabbit)	
Skin Contact:	Practically Non-Irritating (Rabbit)	
Skin Sensitization:	A weak skin sensitizer in animal tests.	

Reproductive/Developmental Effects

Lambda-Cyhalothrin : Not a developmental or reproductive toxicant.

Chronic/Subchronic Toxicity Studies

Lambda-Cyhalothrin : Reversible paresthesia (abnormal skin sensation).
Reversible clinical signs of neurotoxicity in mammals.

Carcinogenicity

Lambda-Cyhalothrin : No treatment-related tumors in rats or mice.

Other Toxicity Information

In humans, contact with exposed skin may result in temporary itching, tingling, burning or numbness, called paresthesia. The effect may result from splash, aerosol, or hot vapor contact, or transfer to the face from contaminated gloves and hands. The symptoms normally disappear within 24 hours. Face and genital areas are especially susceptible to this effect. Paresthesia involving the face is also known as "subjective facial sensation" or SFS.

Toxicity of Other Components

1,2,4-Trimethylbenzene (<= 2.5%)

Test results reported in Section 11 for the final product take into account any acute hazards related to the 1,2,4-trimethylbenzene in the formulation.

Cumene (< 1%)

Exposure to cumene vapors may cause irritation to eyes, skin, and respiratory tract. Cumene may also cause headaches, dizziness, anesthesia, drowsiness, unconsciousness and other central nervous system effects. Prolonged exposure to high concentrations (>100 PPM) may result in liver, kidney or lung damage.

Petroleum Solvent

The supplier reports that high vapor/aerosol concentrations (> 1000 ppm) are irritating to the eyes and the respiratory tract, may cause headaches, dizziness, anesthesia, drowsiness, unconsciousness and other central nervous system effects.

Propylene Glycol

Test results reported in Section 11 for the final product take into account any acute hazards related to the propylene glycol in the formulation.
Reported to cause central nervous system depression (anesthesia, dizziness, confusion), headache and nausea. Chronic dietary exposure caused kidney and liver injury in experimental animals.

Xylene (<= 1%)

Test results reported in Section 11 for the final product take into account any acute hazards related to the xylene in the formulation.

Target Organs

Active Ingredients

Lambda-Cyhalothrin : Liver, nervous system

Inert Ingredients

1,2,4-Trimethylbenzene: Not Applicable

Cumene: Skin, eye, liver, respiratory tract, kidney, CNS

Petroleum Solvent: Eye, respiratory tract, CNS
Propylene Glycol: CNS, kidney, liver
Xylene: Not Applicable

12. ECOLOGICAL INFORMATION

Summary of Effects

Lambda-Cyhalothrin :

Very toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Eco-Acute Toxicity

Lambda-Cyhalothrin :

Fish (Rainbow Trout) 96-hour LC50 0.19 ppb
Fish (Bluegill Sunfish) 96-hour LC50 0.21 ppb
Bird (Mallard Duck) LD50 Oral > 3950 mg/kg
Bird (Mallard Duck) 8-day dietary LC50 > 3948
Bee (Contact) LD50 0.038 ug/bee
Invertebrate (Water Flea) 48-hour EC50 0.04 ppb
Bird (Bobwhite Quail) 8-day dietary LC50 > 5300 ppm

Eco-Chronic Toxicity

Lambda-Cyhalothrin :

Invertebrate (Water Flea) 21-day LOEC 0.0035 ppb
Bird (Mallard Duck) Reproduction 19-week LOEL > 30 ppm
Fish (Fathead Minnow) 300-day LOEC 0.062 ppb

Environmental Fate

Lambda-Cyhalothrin :

The information presented here is for the active ingredient, lambda-cyhalothrin.
Not persistent in soil or water. Immobile in soil. Sinks in water (after 24 h).

13. DISPOSAL CONSIDERATIONS

Disposal

Do not reuse product containers. Dispose of product containers, waste containers, and residues according to local, state, and federal health and environmental regulations.

Characteristic Waste: Not Applicable

Listed Waste: Contains Cumene U055; Contains Xylene U239

14. TRANSPORT INFORMATION

DOT Classification

Ground Transport - NAFTA
Containers < 450 liters: Not regulated.
Containers > 450 liters:
Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Lambda-Cyhalothrin)
Hazard Class or Division: Class 9
Identification Number: UN 3082
Packing Group: PG III

Air Transport - NAFTA
Containers < 450 liters: Not regulated.
Containers > 450 liters: Prohibited.

B/L Freight Classification

Insecticides, NOIBN, O/T Poison

Comments

Water Transport - International
Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Lambda-Cyhalothrin), Marine Pollutant
Hazard Class or Division: Class 9
Identification Number: UN 3082
Packing Group: PG III
IMDG EMS #: F-A, S-F

Air Transport - International
Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Lambda-Cyhalothrin)
Hazard Class or Division: Class 9
Identification Number: UN 3082
Packing Group: PG III
Packing Auth.: 914
Note: Max. inner packages 5 liters
Max. single packages 450 liters

15. REGULATORY INFORMATION

EPCRA SARA Title III Classification

Section 311/312 Hazard Classes:	Acute Health Hazard Chronic Health Hazard
Section 313 Toxic Chemicals:	Cumene (< 1%) (CAS No. 98-82-8) 1,2,4-Trimethylbenzene (<= 2.5%) (CAS No. 95-63-6) Xylene (<= 1%) (CAS No. 1330-20-7)

California Proposition 65

Not Applicable

CERCLA/SARA 302 Reportable Quantity (RQ)

Report product spills > 520 gal. (based on xylene [RQ = 100 lbs.] content in the formulation)

RCRA Hazardous Waste Classification (40 CFR 261)

Not Applicable

TSCA Status

Exempt from TSCA, subject to FIFRA

16. OTHER INFORMATION

NFPA Hazard Ratings		HMIS Hazard Ratings	
Health:	2	Health:	2
Flammability:	1	Flammability:	1
Instability:	0	Reactivity:	0

0	Minimal
1	Slight
2	Moderate
3	Serious
4	Extreme

For non-emergency questions about this product call:

1-800-334-9481

Original Issued Date: 7/14/1999
Revision Date: 6/13/2007 Replaces: 5/22/2006

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein.

End of MSDS

MATERIAL SAFETY DATA SHEET

Diesel Fuel (All Types)

MSDS No. 9909

EMERGENCY OVERVIEW
CAUTION!
OSHA/NFPA COMBUSTIBLE LIQUID - SLIGHT TO MODERATE IRRITANT
EFFECTS CENTRAL NERVOUS SYSTEM
HARMFUL OR FATAL IF SWALLOWED

Moderate fire hazard. Avoid breathing vapors or mists. May cause dizziness and drowsiness. May cause moderate eye irritation and skin irritation (rash). Long-term, repeated exposure may cause skin cancer.
If ingested, do NOT induce vomiting, as this may cause chemical pneumonia (fluid in the lungs).

NFPA 704 (Section 16)

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Hess Corporation
1 Hess Plaza
Woodbridge, NJ 07095-0961

EMERGENCY TELEPHONE NUMBER (24 hrs): **CHEMTREC (800) 424-9300**
COMPANY CONTACT (business hours): Corporate Safety (732) 750-6000
MSDS INTERNET WEBSITE: www.hess.com (See Environment, Health, Safety & Social Responsibility)

SYNONYMS: Ultra Low Sulfur Diesel (ULSD); Low Sulfur Diesel; Motor Vehicle Diesel Fuel; Diesel Fuel #2; Dyed Diesel Fuel; Non-Road, Locomotive and Marine Diesel Fuel; Tax-exempt Diesel Fuel

See Section 16 for abbreviations and acronyms.

2. COMPOSITION and CHEMICAL INFORMATION ON INGREDIENTS

INGREDIENT NAME (CAS No.)	CONCENTRATION PERCENT BY WEIGHT
Diesel Fuel (68476-34-6)	100
Naphthalene (91-20-3)	Typically < 0.01

A complex mixture of hydrocarbons with carbon numbers in the range C9 and higher. Diesel fuel may be dyed (red) for tax purposes. May contain a multifunctional additive.

3. HAZARDS IDENTIFICATION

EYES
Contact with liquid or vapor may cause mild irritation.

SKIN
May cause skin irritation with prolonged or repeated contact. Practically non-toxic if absorbed following acute (single) exposure. Liquid may be absorbed through the skin in toxic amounts if large areas of skin are repeatedly exposed.

INGESTION
The major health threat of ingestion occurs from the danger of aspiration (breathing) of liquid drops into the lungs, particularly from vomiting. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure and even death.

Ingestion may cause gastrointestinal disturbances, including irritation, nausea, vomiting and diarrhea, and central nervous system (brain) effects similar to alcohol intoxication. In severe cases, tremors, convulsions, loss of consciousness, coma, respiratory arrest, and death may occur.

INHALATION
Excessive exposure may cause irritations to the nose, throat, lungs and respiratory tract. Central nervous system (brain) effects may include headache, dizziness, loss of balance and coordination, unconsciousness, coma, respiratory failure, and death.

WARNING: the burning of any hydrocarbon as a fuel in an area without adequate ventilation may result in hazardous levels of combustion products, including carbon monoxide, and inadequate oxygen levels, which may cause unconsciousness, suffocation, and death.

CHRONIC EFFECTS and CARCINOGENICITY
Similar products produced skin cancer and systemic toxicity in laboratory animals following repeated applications. The significance of these results to human exposures has not been determined - see Section 11 Toxicological Information.

IARC classifies whole diesel fuel exhaust particulates as probably carcinogenic to humans (Group 2A). NIOSH regards whole diesel fuel exhaust particulates as a potential cause of occupational lung cancer based on animal studies and limited evidence in humans.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
Irritation from skin exposure may aggravate existing open wounds, skin disorders, and dermatitis (rash).

4. FIRST AID MEASURES

EYES
In case of contact with eyes, immediately flush with clean, low-pressure water for at least 15 min. Hold eyelids open to ensure adequate flushing. Seek medical attention.

SKIN
Remove contaminated clothing. Wash contaminated areas thoroughly with soap and water or waterless hand cleanser. Obtain medical attention if irritation or redness develops.

INGESTION
DO NOT INDUCE VOMITING. Do not give liquids. Obtain immediate medical attention. If spontaneous vomiting occurs, lean victim forward to reduce the risk of aspiration. Monitor for breathing difficulties. Small amounts of material which enter the mouth should be rinsed out until the taste is dissipated.

INHALATION
Remove person to fresh air. If person is not breathing provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES:

FLASH POINT:	> 125 ^{o}F (> 52 ^{o}C) minimum PMCC
AUTOIGNITION POINT:	494 ^{o}F (257 ^{o}C)
OSHA/NFPA FLAMMABILITY CLASS:	2 (COMBUSTIBLE)
LOWER EXPLOSIVE LIMIT (%):	0.6
UPPER EXPLOSIVE LIMIT (%):	7.5

FIRE AND EXPLOSION HAZARDS
Vapors may be ignited rapidly when exposed to heat, spark, open flame or other source of ignition. When mixed with air and exposed to an ignition source, flammable vapors can burn in the open or explode in confined spaces. Being heavier than air, vapors may travel long distances to an ignition source and flash back. Runoff to sewer may cause fire or explosion hazard.

EXTINGUISHING MEDIA
SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO2, water spray, fire fighting foam, or Halon.

LARGE FIRES: Water spray, fog or fire fighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers.

FIRE FIGHTING INSTRUCTIONS

Small fires in the incipient (beginning) stage may typically be extinguished using handheld portable fire extinguishers and other fire fighting equipment.

Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH/MSHA- approved pressure-demand self-contained breathing apparatus with full facepiece and full protective clothing.

Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam.

See Section 16 for the NFPA 704 Hazard Rating.

6. ACCIDENTAL RELEASE MEASURES

ACTIVATE FACILITY'S SPILL CONTINGENCY OR EMERGENCY RESPONSE PLAN.

Evacuate nonessential personnel and remove or secure all ignition sources. Consider wind direction; stay upwind and uphill, if possible. Evaluate the direction of product travel, diking, sewers, etc. to confirm spill areas. Spills may infiltrate subsurface soil and groundwater; professional assistance may be necessary to determine the extent of subsurface impact.

Carefully contain and stop the source of the spill, if safe to do so. Protect bodies of water by diking, absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material. The use of fire fighting foam may be useful in certain situations to reduce vapors. The proper use of water spray may effectively disperse product vapors or the liquid itself, preventing contact with ignition sources or areas/equipment that require protection.

Take up with sand or other oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container for reclamation or disposal - caution, flammable vapors may accumulate in closed containers. Response and clean-up crews must be properly trained and must utilize proper protective equipment (see Section 8).

7. HANDLING and STORAGE

HANDLING PRECAUTIONS

Handle as a combustible liquid. Keep away from heat, sparks, and open flame! Electrical equipment should be approved for classified area. Bond and ground containers during product transfer to reduce the possibility of static-initiated fire or explosion.

Diesel fuel, and in particular low and ultra low sulfur diesel fuel, has the capability of accumulating a static electrical charge of sufficient energy to cause a fire/explosion in the presence of lower flashpoint products such as gasoline. The accumulation of such a static charge occurs as the diesel flows through pipelines, filters, nozzles and various work tasks such as tank/container filling, splash loading, tank cleaning; product sampling; tank gauging; cleaning, mixing, vacuum truck operations, switch loading, and product agitation. There is a greater potential for static charge accumulation in cold temperature, low humidity conditions.

Documents such as 29 CFR OSHA 1910.106 "Flammable and Combustible Liquids, NFPA 77 Recommended Practice on Static Electricity, API 2003 "Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents and ASTM D4865 "Standard Guide for Generation and Dissipation of Static

Electricity in Petroleum Fuel Systems" address special precautions and design requirements involving loading rates, grounding, bonding, filter installation, conductivity additives and especially the hazards associated with "switch loading." ["Switch Loading" is when a higher flash point product (such as diesel) is loaded into tanks previously containing a low flash point product (such as gasoline) and the electrical charge generated during loading of the diesel results in a static ignition of the vapor from the previous cargo (gasoline).]

Note: When conductivity additives are used or are necessary the product should achieve 25 picosiemens/meter or greater at the handling temperature.

STORAGE PRECAUTIONS

Keep away from flame, sparks, excessive temperatures and open flame. Use approved vented containers. Keep containers closed and clearly labeled. Empty product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition.

Store in a well-ventilated area. This storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code". Avoid storage near incompatible materials. The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 "Cleaning Mobile Tanks In Flammable and Combustible Liquid Service" and API RP 2015 "Cleaning Petroleum Storage Tanks".

WORK/HYGIENIC PRACTICES

Emergency eye wash capability should be available in the near proximity to operations presenting a potential splash exposure. Use good personal hygiene practices. Avoid repeated and/or prolonged skin exposure. Wash hands before eating, drinking, smoking, or using toilet facilities. Do not use as a cleaning solvent on the skin. Do not use solvents or harsh abrasive skin cleaners for washing this product from exposed skin areas. Waterless hand cleaners are effective. Promptly remove contaminated clothing and launder before reuse. Use care when laundering to prevent the formation of flammable vapors which could ignite via washer or dryer. Consider the need to discard contaminated leather shoes and gloves.

8. EXPOSURE CONTROLS and PERSONAL PROTECTION

EXPOSURE LIMITS

Components (CAS No.)	Source	Exposure Limits TWA/STEL	Note
Diesel Fuel: (68476-34-6)	OSHA	5 mg/m, as mineral oil mist	
	ACGIH	100 mg/m^3 (as totally hydrocarbon vapor) TWA	A3, skin
Naphthalene (91-20-3)	OSHA	10 ppm TWA	
	ACGIH	10 ppm TWA / 15 ppm STEL	A4, Skin

ENGINEERING CONTROLS

Use adequate ventilation to keep vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces.

EYE/FACE PROTECTION

Safety glasses or goggles are recommended where there is a possibility of splashing or spraying.

SKIN PROTECTION

Gloves constructed of nitrile, neoprene, or PVC are recommended. Chemical protective clothing such as of E.I. DuPont TyChem®, Saranex® or equivalent recommended based on degree of exposure. Note: The resistance of specific material may vary from product to product as well as with degree of exposure. Consult manufacturer specifications for further information.

RESPIRATORY PROTECTION
A NIOSH/MSHA-approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited. Refer to OSHA 29 CFR 1910.134, NIOSH Respirator Decision Logic, and the manufacturer for additional guidance on respiratory protection selection.

Use a positive pressure, air-supplied respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection.

9. PHYSICAL and CHEMICAL PROPERTIES

APPEARANCE
Clear, straw-yellow liquid. Dyed fuel oil will be red or reddish-colored.

ODOR
Mild, petroleum distillate odor

BASIC PHYSICAL PROPERTIES

BOILING RANGE:	320 to 690 oF (160 to 366 ^{o}C)
VAPOR PRESSURE:	0.009 psia @ 70 ^{o}F (21 ^{o}C)
VAPOR DENSITY (air = 1):	> 1.0
SPECIFIC GRAVITY (H_2O = 1):	0.83 to 0.88 @ 60 ^{o}F (16 ^{o}C)
PERCENT VOLATILES:	100 %
EVAPORATION RATE:	Slow; varies with conditions
SOLUBILITY (H_2O):	Negligible

10. STABILITY and REACTIVITY

STABILITY: Stable. Hazardous polymerization will not occur.

CONDITIONS TO AVOID and INCOMPATIBLE MATERIALS
Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources. Keep away from strong oxidizers; Viton ®; Fluorel ®

HAZARDOUS DECOMPOSITION PRODUCTS
Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke).

11. TOXICOLOGICAL PROPERTIES

ACUTE TOXICITY
Acute dermal LD50 (rabbits): > 5 ml/kg
Acute oral LD50 (rats): 9 ml/kg
Primary dermal irritation: extremely irritating (rabbits)
Draize eye irritation: non-irritating (rabbits)
Guinea pig sensitization: negative

CHRONIC EFFECTS AND CARCINOGENICITY
Carcinogenic: OSHA: NO IARC: NO NTP: NO ACGIH: A3

Studies have shown that similar products produce skin tumors in laboratory animals following repeated applications without washing or removal. The significance of this finding to human exposure has not been determined. Other studies with active skin carcinogens have shown that washing the animal's skin with soap and water between applications reduced tumor formation.

MUTAGENICITY (genetic effects)
This material has been positive in a mutagenicity study.

12. ECOLOGICAL INFORMATION

Keep out of sewers, drainage areas, and waterways. Report spills and releases, as applicable, under Federal and State regulations.

13. DISPOSAL CONSIDERATIONS

Consult federal, state and local waste regulations to determine appropriate disposal options.

14. TRANSPORTATION INFORMATION

PROPER SHIPPING NAME:	Diesel Fuel	Placard (International Only):
HAZARD CLASS and PACKING GROUP:	3, PG III	
DOT IDENTIFICATION NUMBER:	NA 1993 (Domestic) UN 1202 (International)	
DOT SHIPPING LABEL:	None	

Use Combustible Placard if shipping in bulk domestically

15. REGULATORY INFORMATION

U.S. FEDERAL, STATE, and LOCAL REGULATORY INFORMATION

This product and its constituents listed herein are on the EPA TSCA Inventory. Any spill or uncontrolled release of this product, including any substantial threat of release, may be subject to federal, state and/or local reporting requirements. This product and/or its constituents may also be subject to other regulations at the state and/or local level. Consult those regulations applicable to your facility/operation.

CLEAN WATER ACT (OIL SPILLS)

Any spill or release of this product to "navigable waters" (essentially any surface water, including certain wetlands) or adjoining shorelines sufficient to cause a visible sheen or deposit of a sludge or emulsion must be reported immediately to the National Response Center (1-800-424-8802) as required by U.S. Federal Law. Also contact appropriate state and local regulatory agencies as required.

CERCLA SECTION 103 and SARA SECTION 304 (RELEASE TO THE ENVIRONMENT)

The CERCLA definition of hazardous substances contains a “petroleum exclusion” clause which exempts crude oil, refined, and unrefined petroleum products and any indigenous components of such. However, other federal reporting requirements (e.g., SARA Section 304 as well as the Clean Water Act if the spill occurs on navigable waters) may still apply.

SARA SECTION 311/312 - HAZARD CLASSES

ACUTE HEALTH	CHRONIC HEALTH	FIRE	SUDDEN RELEASE OF PRESSURE	REACTIVE
X	X	X	--	--

SARA SECTION 313 - SUPPLIER NOTIFICATION

This product may contain listed chemicals below the *de minimis* levels which therefore are not subject to the supplier notification requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and of 40 CFR 372. If you may be required to report releases of chemicals listed in 40 CFR 372.28, you may contact Hess Corporate Safety if you require additional information regarding this product.

CALIFORNIA PROPOSITON 65 LIST OF CHEMICALS

This product contains the following chemicals that are included on the Proposition 65 "List of Chemicals" required by the California Safe Drinking Water and Toxic Enforcement Act of 1986:

INGREDIENT NAME (CAS NUMBER)	Date Listed
Diesel Engine Exhaust (no CAS Number listed)	10/01/1990

CANADIAN REGULATORY INFORMATION (WHMIS)

Class B, Division 3 (Combustible Liquid) and Class D, Division 2, Subdivision B (Toxic by other means)

16. OTHER INFORMATION

NFPA® HAZARD RATING HEALTH: 0
FIRE: 2
REACTIVITY: 0

Refer to NFPA 704 "Identification of the Fire Hazards of Materials" for further information

HMIS® HAZARD RATING HEALTH: 1 * * Chronic
FIRE: 2
PHYSICAL: 0

SUPERSEDES MSDS DATED: 02/28/2001

ABBREVIATIONS:

AP = Approximately < = Less than > = Greater than
N/A = Not Applicable N/D = Not Determined ppm = parts per million

ACRONYMS:

ACGIH	American Conference of Governmental Industrial Hygienists
AIHA	American Industrial Hygiene Association
ANSI	American National Standards Institute (212) 642-4900
API	American Petroleum Institute (202) 682-8000
CERCLA	Comprehensive Emergency Response, Compensation, and Liability Act
DOT	U.S. Department of Transportation [General info: (800) 467-4922]
EPA	U.S. Environmental Protection Agency
HMIS	Hazardous Materials Information System
IARC	International Agency For Research On Cancer
MSHA	Mine Safety and Health Administration
NFPA	National Fire Protection Association (617)770-3000
NIOSH	National Institute of Occupational Safety and Health
NOIC	Notice of Intended Change (proposed change to ACGIH TLV)
NTP	National Toxicology Program
OPA	Oil Pollution Act of 1990
OSHA	U.S. Occupational Safety & Health Administration
PEL	Permissible Exposure Limit (OSHA)
RCRA	Resource Conservation and Recovery Act
REL	Recommended Exposure Limit (NIOSH)
SARA	Superfund Amendments and Reauthorization Act of 1986 Title III
SCBA	Self-Contained Breathing Apparatus
SPCC	Spill Prevention, Control, and Countermeasures
STEL	Short-Term Exposure Limit (generally 15 minutes)
TLV	Threshold Limit Value (ACGIH)
TSCA	Toxic Substances Control Act
TWA	Time Weighted Average (8 hr.)
WEEL	Workplace Environmental Exposure Level (AIHA)
WHMIS	Canadian Workplace Hazardous Materials Information System

MATERIAL SAFETY DATA SHEET

Neutron Industries
7107 North Black Canyon Highway, Phoenix, AZ 85021 (602) 864-0090

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: **D-MOLISH**
Product Description: A formulated liquid cleaner and deodorizer.
24 Hour Emergency CHEMTREC Number: 800-424-9300
MSDS Number: M00120

2. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients	CAS Number	Weight	ACGIH	OSHA
Bacterial Concentrate	Proprietary	< 1.0%	NA	NA
Ethoxylated Alcohols	68439-46-3	< 2.0%	NA	NA

3. HAZARDS IDENTIFICATION

*****EMERGENCY OVERVIEW*****
Direct contact may cause eye irritation.

POTENTIAL HEALTH EFFECTS

Eye Contact: May cause eye irritation.
Skin Contact: Prolonged or repeated exposure may cause irritation.
Inhalation: None known.
Ingestion: May be harmful if swallowed. May cause nausea, vomiting, diarrhea.
General: May cause infections if in contact with open wounds.

4. FIRST AID MEASURES

Eye Contact: Promptly flush with a large amount of water for at least 15 minutes. Contact a physician if symptoms persist.
Skin Contact: Promptly wash with soap and water and rinse thoroughly. Remove contaminated clothing and shoes. Launder clothing before reuse. If irritation persists, contact a physician.
Inhalation: Remove to fresh air. If irritation persists, contact a physician.
Ingestion: Give two glasses of water. Induce vomiting. Never give anything to an unconscious person. Contact a physician immediately.

5. FIRE FIGHTING MEASURES

Flashpoint: None to boiling point.
Lower Explosive Limit(LEL): NA Upper Explosive Limit(UEL): NA Autoignition Temperature: NA
Flammable Properties: None expected.
Extinguishing Media: Carbon Dioxide, water, dry chemical, foam.
Fire Fighting Instructions: Wear self-contained breathing apparatus and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES

Ventilate area. Use absorbent to pick up residue and dispose of properly. Dispose of in accordance with Federal, State and Local Regulations regarding waste disposal.

7. HANDLING AND STORAGE

Handling: Use with adequate ventilation. Wash thoroughly after handling. Do not take internally. Harmful if swallowed. Empty product containers may contain product residue. Avoid contact with skin, eyes and clothing. Do not mix with other chemicals.
Storage: Keep out of reach of children. Keep containers closed when not in use. Store in a well-ventilated area at 40ºF (4ºC) to 90ºF (32ºC).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Use general or local ventilation to keep exposure levels below exposure limits.
Personal Protective Equipment:
Respiratory: Typically not required.
Eye: Wear safety glasses or goggles with unperforated sideshields.
Skin: Wear chemically impervious gloves if prolonged or repeated contact will occur.
Other: An emergency eyewash station or source of clean potable water should be available in case of accidental eye contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Milky
Physical State: Liquid
Boiling Point: 212ºF
Solubility in Water: Complete
VOC Content: 0%
Odor: Mild
pH: 6.5 - 8.0
Freezing/Melting Point: NA
Specific Gravity: 1.006
Evaporation Rate: NA

10. STABILITY AND REACTIVITY

Stability: Stable.
Hazardous Polymerization: Will not occur.
Conditions to Avoid: Heating and freezing.
Incompatibility: Strong acids or bases may deactivate.
Hazardous Decomposition Products: Carbon Dioxide, Carbon Monoxide.

11. TOXICOLOGICAL INFORMATION

IARC / NTP / OSHA: This product contains no ingredient at 0.1% or greater that is listed as a human carcinogen.

Hazardous Ingredients	CAS Number	LD50	LC50
Bacterial Concentrate	Proprietary	NE	NE
Ethoxylated Alcohols	68439-46-3	2.7 g/kg (oral rat)	NE

12. ECOLOGICAL INFORMATION

NA

13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with the Federal, State, and Local regulations regarding pollution and waste disposal. Product as formulated contains no listed hazardous wastes and meets none of the definitions of unspecified hazardous wastes.

14. TRANSPORT INFORMATION

DOT Shipping Data: Not regulated
Canadian TDG: Not available for sale in Canada.

15. REGULATORY INFORMATION

TSCA: All ingredients in this product are listed or exempt from listing on the TSCA Chemical Inventory.
CEPA: All ingredients in this product are listed or exempt from listing on the Canadian DSL/NDSL.

Proposition 65: Raw materials used in this product have identified the opportunity for the presence of very low levels of the following California Proposition 65 chemicals known to the state of California to cause cancer, birth defects or other reproductive harm: Ethylene Oxide (75-21-8).
We have tested a representative sample of this product for the presence of these chemicals and have found none to be present at above analytical detection limits.

VOC Content: Product category not currently VOC regulated.

SARA 313: This product contains no toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40CFR372).

HMIS RATING: HEALTH = 1 FLAMMABILITY = 0 REACTIVITY = 0 PPE = B

WHMIS RATING: Not available for sale in Canada.

16. OTHER INFORMATION

NA = Not Available or Not Applicable
NE = Not Established

Read and follow all label directions and precautions before using the product. This product is intended for industrial and institutional use only. NOT FOR HOUSEHOLD USE OR RESALE. KEEP OUT OF THE REACH OF CHILDREN. While we believe that the data contained herein is factual and the opinions expressed are those of qualified experts, the data are not to be taken as a warranty or representation for which the company assumes legal responsibility. They are offered solely for your consideration, investigation, and verification. Any use of these data and information must be determined by the user to be in accordance with applicable Federal, State, and Local Laws and regulations.

HEALTH AND SAFETY INFORMATION: (216) 861-7114

Completed On: October 2006 Replaces: February 2006 Completed By: Regulatory Affairs

PLANILLA DE DATOS DE SEGURIDAD DE LOS MATERIALES

Neutron Industries
7107 North Black Canyon Highway, Phoenix, AZ 85021 (602) 864-0090

1. PRODUCTO QUÍMICO Y DATOS DE LA COMPAÑÍA

Nombre del producto: **D-MOLISH**
Descripción del producto: líquido limpiador y desodorizante.
Núm. CHEMTREC (emergencias) las 24 horas: 800-424-9300
Núm. MSDS: M00120

2. COMPOSICIÓN/INFORMACIÓN SOBRE LOS COMPONENTES

Componentes peligrosos	Número CAS	Peso	ACGIH	OSHA
Concentrado bacteriano	Patentado	< 1.0%	NA	NA
Ethoxylated alcoholes	68439-46-3	< 2.0%	NA	NA

3. ENUMERACIÓN DE PELIGROS

*****DESCRIPCIÓN GENERAL DE LAS SITUACIONES DE EMERGENCIA*****

El contacto directo puede causar la irritación del ojo.

POSIBLES EFECTOS SOBRE LA SALUD

Contacto con los ojos: Podría irritar los ojos.
Contacto con la piel: La exposición prolongada o repetida puede provocar irritación.
Inhalación: Ninguno conocido.
Ingestión: Podría ser nocivo si se ingiriera. Puede provocar náuseas, vómitos, diarrea.
Aviso general: Podría provocar infecciones si entrara en contacto con heridas abiertas.

4. MEDIDAS DE PRIMEROS AUXILIOS

Contacto con los ojos: Lávese inmediatamente con abundante agua durante al menos 15 minutos. Si los síntomas no desaparecieran, comuníquese con un médico.
Contacto con la piel: Lávese inmediatamente con agua y jabón; enjuáguese bien. Quítese la ropa y los zapatos contaminados. Lave la ropa antes de volver a usarla. Si la irritación no desapareciera, comuníquese con un médico.
Inhalación: Traslade a la víctima a un sitio con aire fresco. Si la irritación no desapareciera, comuníquese con un médico.
Ingestión: Beba dos vasos de agua. Induzca el vómito. Jamás administre nada por vía oral a una persona que haya perdido el conocimiento. Comuníquese de inmediato con un médico.

5. MEDIDAS PARA COMBATIR INCENDIOS

Pto. inflamabilidad: No hasta pto. ebullición.
Límite explosivo inferior (LEL): NA Límite explosivo superior (UEL): NA Temperatura de autoignición: NA
Inflamabilidad: No se espera que se produzca.
Medio extinguidor: Dióxido de carbono, agua, productos químicos en polvo, espuma.
Instrucciones para combatir incendios: Use un aparato autónomo para respirar e indumentaria de protección.

6. MEDIDAS EN CASO DE DERRAME ACCIDENTAL

Ventile el área. Use materiales absorbentes para recoger los residuos y deséchelos como corresponda. Obedezca todos los reglamentos federales, estatales y locales relativos a la disposición final de residuos.

7. MANIPULACIÓN Y ALMACENAMIENTO

Manipulación: Use con la ventilación adecuada. Lávese bien luego de manipular este producto. No ingerir. Nocivo si se ingiriera. Los recipientes vacíos podrían contener residuos del producto. Evite el contacto con la piel, los ojos y la ropa. No mezcle con otros productos químicos.
Almacenamiento: Mantenga fuera del alcance de los niños. Cuando no los use, mantenga los recipientes bien cerrados. Guarde en un sitio bien ventilado a 40 ºF (4 ºC) a 90 ºF (32 ºC).

8. CONTROL DE EXPOSICIÓN/PROTECCIÓN PERSONAL

Controles de ingeniería: Utilice ventilación general o local para mantener la exposición por debajo de los límites permitidos.
Equipo de protección personal:
Respiratorio: Por lo general, no se necesita.
Ojos: Use anteojos de seguridad con protección lateral sin perforaciones.
Piel: Si el contacto fuera prolongado o repetido, use guantes resistentes a productos químicos.
Otros: Una estación del eyewash de la emergencia o una fuente del agua potable limpia debe estar disponible en caso de que del contacto visual accidental.ra ojos.

9. PROPIEDADES FÍSICAS Y QUÍMICAS

Aspecto: Lechoso
Estado de agregación: Líquido
Pto. ebullición: 212ºF
Solubilidad en agua: Total
Contenido de VOC: 0%
Olor: Suave
pH: 6.5 - 8.0
Pto. congelación/fusión: NA
Peso específico: 1.006 +/- 0.005
Velocidad de evaporación: NA

10. ESTABILIDAD Y REACTIVIDAD

Estabilidad: Estable
Polimerización peligrosa: No ocurrirá.
Condiciones a evitar: Calentamiento y congelación.
Incompatibilidad: Los ácidos o bases fuertes podrían desactivar el producto.
Productos de descomposición peligrosos: Dióxido de carbono, monóxido de carbono.

11. INFORMACIÓN TOXICOLÓGICA

IARC / NTP / OSHA: Este producto no contiene componentes en cantidades = 0.1%, los cuales figuren como carcinógenos.

Componentes peligrosos	Número CAS	LC50	LC50
Concentrado bacteriano	Patentado	NE	NE
Ethoxylated alcoholes	68439-46-3	2.7 g/kg (oral rat)	NE

12. INFORMACIÓN ECOLÓGICA

NA

13. SUGERENCIAS PARA SU DISPOSICIÓN FINAL

Obedezca todos los reglamentos federales, estatales y locales relativos al método de disposición final de productos contaminantes. El producto como formulado no contiene ningún desecho peligroso mencionado y no resuelve ningunas de las definiciones de desechos peligrosos sin especificar.

14. INFORMACIÓN SOBRE TRANSPORTE

Datos del embarque según DOT: No se ha regulado.
TDG canadiense: No disponible para la venta en Canadá.

15. INFORMACIÓN SOBRE REGLAMENTOS

TSCA: Todos los componentes de este producto figuran en la lista de inventario de sustancias químicas de TSCA o están exentas de ese requisito.
CEPA: Todos los componentes de este producto figuran en la lista canadiense DSL/NDSL o están exentos de ese requisito.

Propuesta 65: Las materias primas usadas en este producto han identificado la oportunidad para la presencia de los niveles muy bajos de los productos químicos siguientes del asunto 65 de California sabidos al estado de California para causar el cáncer, los defectos del nacimiento o el otro daño reproductivo: Óxido del etileno (75-21-8). Hemos probado una muestra representativa de este producto para la presencia de estos productos químicos y no hemos encontrado ninguno estar presentes en los límites de detección analíticos antedichos.

Contenido de VOC: La categoría VOC del producto reguló no no actualmente.

SARA 313: Este producto no contiene productos químicos tóxicos sujetos a los requisitos de información del Artículo 313 de la ley de 1986 de Planeamiento ante emergencias y Derecho a Estar Informado de la Comunidad (40 CFR 372).

CLASIFICACIÓN HMIS: SALUD = 1 INFLAMABILIDAD = 0 REACTIVIDAD = 0 EPP = B

CLASIFICACIÓN WHMIS: No disponible para la venta en Canadá.

16. OTRA INFORMACIÓN

NA = No disponible o No se aplica
NE = No se ha establecido

Antes de utilizar este producto, lea y obedezca todas las instrucciones y precauciones. Este producto fue formulado para utilizarse únicamente en el ámbito industrial e institucional. NO ES PARA REVENTA NI PARA USO EN EL ÁMBITO HOGAREÑO. MANTENGA FUERA DEL ALCANCE DE LOS NIÑOS. Si bien se considera que los datos contenidos en esta planilla son correctos y las opiniones expresadas son las de calificados expertos, los datos no deberán considerarse como garantía ni como declaración por las que la compañía asume responsabilidad legal alguna. Estos datos se brindan sólo para evaluación, investigación y verificación por parte del cliente. El usuario es quien deberá determinar si cualquier uso que se dé a estos datos e información está de acuerdo con las leyes y reglamentos federales, estatales y locales aplicables.

INFORMACIÓN DE SEGURIDAD Y SALUD: (216) 861-7114

Finalizada en: Octubre de 2006 Reemplaza: Febrero de 2006 Preparada por: Especialista en reglamentos

Material Safety Data Sheet

MSDS#: 224-18

Sanford Corporation
2711 Washington Boulevard
Bellwood, IL 60104

Telephone Number:	1-800-323-0749
Initiated By:	Susan Nyborg
Date of Last Revision:	June 1, 2001
Medical Emergency No:	1-800-228-5635

Section One: Product Identification

Product Name: Expo$_R$ 2 Cleaner for Dry Erase Surfaces

Colors: Clear

Sanford Corporation is a member of The Art and Creative Materials Institute, Inc. This product is certified by the Institute to be labeled in accordance with the voluntary chronic hazard labeling standard ASTM D4236 and is labeled with the CL Cautionary Label Seal. Products bearing the CL Seal are certified to be properly labeled in a program of toxicological evaluation by a medical expert for any known health risks and with information on the safe and proper use of these materials. Conforms to ASTM D4236.

Section Two: Composition

Water, isopropyl alcohol (67-63-0), n-propoxypropanol (1569-01-3), fragrances, surfactants

Section Three: Physical and Chemical Characteristics

	For isopropanol:
Boiling Point:	180^{O}F at 760 mm Hg
Vapor Pressure (mm Hg):	33 mm Hg at 68^{O}F
Specific Gravity:	0.78 at 77^{O}F
Solubility in Water:	Miscible mixture
Appearance and Odor:	Clear liquid; lemon odor (for mixture)
Evaporation Rate:	7.7 (ethyl ether = 1)

Section Four: Fire and Explosion Hazard Data

Flash Point (Method Used):	110^{O}F (TCC) for mixture			
Flammability Limits (% by volume):	Lower:	2.5% for isopropanol	Upper:	Not available
Extinguishing Medium:	As appropriate for surrounding area.			
Special Fire Fighting Procedures:	N/A			
Unusual Fire and Explosion Hazards:	N/A			

Section Five: Reactivity Data

Stability:	Stable
Conditions to Avoid:	Avoid extreme heat and flame.
Chemical Incompatibility:	None known
Hazardous Decomposition:	None known
Hazardous Polymerization:	Will not occur.

Section Six: Health Hazard Data

Chemicals Listed as Carcinogens or Potential Carcinogen:

IARC Monographs:	No
National Toxicology Program:	No
OSHA Regulated:	No

WARNING: MAY BE HARMFUL IF SWALLOWED. EYE IRRITANT. CONTAINS: 1-PROPOXY-2-PROPANOL. PRECAUTIONS: Avoid ingestion. Keep away from eyes. KEEP OUT OF REACH OF CHILDREN. FIRST AID: If eye contact occurs, rinse with tap water for 5-10 minutes. If irritation persists, seek medical care. If swallowed, get prompt medical attention. For further health information, contact a poison control center or call 1-800-228-5635.

Section Seven: Precautions for Safe Handling and Use

Steps to Be Taken in Case Material Is Released or Spill:	Wipe up with absorbent material.
Waste Disposal Method:	Dispose in accordance with Federal, State, and Local Regulations.
Precautions to Be Taken in Handling and Storage:	Use in a well-ventilated area.
Other Precautions:	Aim nozzle away from eyes.

Section Eight: Personal Protection and Exposure Control Measures

Eye Protection:	None under normal use conditions. Avoid eye contact.
Skin Protection:	None under normal use conditions. Avoid prolonged skin contact.
Respiratory Protection:	None under normal use conditions.
Ventilation:	Use in a well-ventilated area.
Protective Clothing:	None under normal use conditions.

HMIS Code	
Health	1
Flammability	2
Reactivity	0
Personal Protection	N/A

0 = Minimal / 4 = Severe Hazard

Sanford Corporation has been advised by council that the OSHA Hazard Communication Standard does not apply to the Sanford product described in this MSDS. The reason for the exemption is contained in 29 CFR 1910.1200 (b)(6)(ix), as amended July 1, 1994, per the Code of Federal Regulations. The information contained in this MSDS is forwarded to you for your information, but is not meant to imply that the product is covered by the Hazard Communication Standard, nor is the MSDS meant to comply with all the requirements of the Hazard Communication Standard.

MATERIAL SAFETY DATA SHEET

Identity: **Health Saver® Brand Eye Wash Sterile,Buffered,Saline,Isotonic-** ***Blue Label***

Section I- Company Information

Manufacturer: Niagara Pharmaceuticals Inc.	Emergency Telephone: 1- 800-424-9300(CHEMTREC) 1- (800) 268-9017 Poison Information Centre
Address: 60 Innovation Drive Flamborough, Ontario, Canada L9H 7P3	Telephone: (905) 690-6277 Fax: (905) 690-6281 Date Prepared: December 15, 2011 Prepared By: Reesa James, Quality Assurance

Section II - Material Identification and Information

Components	CAS #'s	%	ACGIH TLV	LD_{50}	LC_{50}
BORIC ACID	10043-35-3	< 2.0	10 mg/m^3	3500 mg/kg(oral rat)	N.Av
SODIUM BORATE	1330-43-4	< 1.0	5mg/m^3	2000mg/kg(oral rabbit)	>2000mg/m^3(rat)
SODIUM CHLORIDE	7647-14-5	< 1.0	N.Av	3000 mg/kg(oral rat)	> 422mg/kg(rat)
DISODIUM EDETATE	6381-92-6	< 0.2	10 mg/m^3	2000 mg/kg(oral rat)	N.Av
BENZALKONIUM CHLORIDE	68424-85-1	< 0.0125	N.Av	400 mg/kg(oral rat)	N.Av
BENZETHONIUM CHLORIDE	121-54-0	< 0.002	N.Av	420 mg/kg(oral rat)	N.Av

Section III - Physical / Chemical Characteristics

Physical State: LIQUID	Specific Gravity (H20 = 1): 1.000-1.020		
Boiling Point: N.Av	Melting Point: N.Av		
Vapour Pressure (mm Hg): N.Av	Evaporation Rate (Water = 1): N.Av		
Vapour Density (Air = 1): N.Av	Water Reactive: NONE		
Solubility in Water: MISCIBLE	Percent Volatile: 97%	pH: 6.3-7.8	
Appearance and Odour: CLEAR, COLOURLESS TO VERY SLIGHTLY PALE YELLOW LIQUID, CHARACTERISTIC ODOUR			

Section IV - Fire and Explosion Hazard Data

Flash Point (Method Used): N/A	Auto-Ignition Temperature: N/A	
Flammability Limits in Air % By Volume: N/A	LEL: N/A	UEL: N/A
Extinguisher Media: CARBON DIOXIDE, WATER, FOAM		
Special Fire Fighting Procedures: NONE		
Unusual Fire and Explosion Hazards: NONE		

Section V - Reactivity Data

Stability	Unstable: NO Stable: YES	Conditions to Avoid: NONE
Incompatibility (Materials to Avoid): STRONG OXIDIZING MATERIALS, STRONG REDUCING AGENTS		
Hazardous Decomposition Products: CARBON MONOXIDE, CARBON DIOXIDE		
Hazardous Polymerization	May Occur: NO Will Not Occur: YES	Conditions to Avoid: NONE

MATERIAL SAFETY DATA SHEET

Identity: **Health Saver® Brand Eye Wash Sterile,Buffered,Saline,Isotonic- Blue Label**

Section VI - Health Hazard Data - Potential Acute Health Effects

Eye Contact:	PRODUCT IS INTENDED FOR USE IN THE OCULAR AREA.
Skin Contact:	PRODUCT HAS NO EFFECT.
Inhalation:	PRODUCT HAS NO EFFECT.
Ingestion:	MAY CAUSE STOMACH DISCOMFORT IF INGESTED.

Section VII - Health Hazard Data

Emergency First Aid Procedures:	SEEK MEDICAL ASSISTANCE FOR FURTHER TREATMENT, OBSERVATION AND SUPPORT IF NECESSARY.
Eye Contact:	NONE REQUIRED
Skin Contact:	NONE REQUIRED
Inhalation:	NONE REQUIRED
Ingestion:	DO NOT INDUCE VOMITING. IF POSSIBLE GIVE 3 TO 4 GLASSES OF MILK (if unavailable, give water). CALL A PHYSICIAN IMMEDIATELY.

Section VIII - Control and Protective Measures

Respiratory Protection (Specify Type):	NONE				
Protection Gloves:	NONE		Eye Protection:	NONE	
Ventilation to be Used:	Local Exhaust:	YES	Special:	N/A	
	Mechanical (General):	N/A	Other:	N/A	
Other Protective Clothing and Equipment:	NOT REQUIRED				
Hygienic Work Practices:	KEEP CONTAINER CLOSED WHEN NOT IN USE. ALWAYS READ LABEL BEFORE USE.				

Section IX - Precautions for Safe Handling and Use / Leak Procedures

Steps to be taken if Material is Spilled or Released:	MOP UP USING LARGE AMOUNTS OF WATER. FLUSH DOWN SANITARY SEWER.
Waste Disposal Methods:	IN ACCORDANCE WITH MUNICIPAL, PROVINCIAL AND FEDERAL REGULATIONS.
Precautions to be Taken in Handling and Storage:	KEEP AWAY FROM EXCESSIVE HEAT. KEEP CONTAINER CLOSED WHEN NOT IN USE.
Other Precautions and/or Special Hazards:	KEEP FROM FREEZING. READ LABEL BEFORE USING.

HMIS Rating:	Health:	1	Flammability:	0	Reactivity:	0	Personal Protection:	0	
NFPA Rating:	Health:	1	Flammability:	0	Reactivity:	0	Special:	0	

Section X - Other Information

N.Av : Not Available

N/A: Not Applicable

Product is intended for single use only. Sterility cannot be guaranteed once protective seal has been broken/removed

Material Safety Data Sheet

according to ANSI Z400.1- 2004 and 29 CFR 1910.1200

GLADE® AIR FRESHENER - CLEAN LINEN™

Version 2.0

Print Date 06/17/2011

Revision Date 05/31/2011

MSDS Number 350000004693
SITE_FORM Number
30000000000000004005.001

1. PRODUCT AND COMPANY IDENTIFICATION

Product information

Trade name	:	GLADE® AIR FRESHENER - CLEAN LINEN™
Use of the Substance/Mixture	:	Air Freshener
Company	:	S.C. Johnson and Son, Limited 1 Webster Street Brantford ON N3T 5R1
Emergency telephone number	:	24 Hour Transport & Medical Emergency Phone (866) 231-5406 24 Hour International Emergency Phone (952) 852-4647 24 Hour Canadian Transport Emergency Phone (CANUTEC) (613) 996-6666

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance / Odor	:	clear / aerosol / pleasant
Immediate Concerns	:	Caution Avoid contact with skin, eyes and clothing. Keep away from heat, sparks and flame. Contents under pressure. Do not puncture or incinerate. Do not store at temperatures above 120 Deg. F (50 Deg C), as container may burst.

Potential Health Effects

Exposure routes	:	Eye, Skin, Inhalation, Ingestion.
Eyes	:	May cause: Mild eye irritation
Skin	:	Prolonged or repeated contact may dry skin and cause irritation.
Inhalation	:	Intentional misuse by deliberately concentrating and inhaling contents can be harmful or fatal.
Ingestion	:	May cause irritation to mouth, throat and stomach. May cause abdominal discomfort.
Aggravated Medical	:	Persons with pre-existing skin disorders may be more

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Condition susceptible to irritating effects.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous chemicals present at or above reportable levels as defined by OSHA 29 CFR 1910.1200 or the Canadian Controlled Products Regulations are listed in this table:

Chemical Name	CAS-No.	Weight percent
Isobutane	75-28-5	10.00 - 30.00
Propane	74-98-6	5.00 - 10.00

For additional information on product ingredients, see www.whatsinsidescjohnson.com.

4. FIRST AID MEASURES

Eye contact : Rinse with plenty of water. Get medical attention if irritation develops and persists.

Skin contact : Rinse with plenty of water. Get medical attention if irritation develops and persists.

Inhalation : Remove to fresh air. If breathing is affected, get medical attention.

Ingestion : Rinse mouth with water.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Specific hazards during fire fighting : Aerosol Product - Containers may rocket or explode in heat of fire.

Further information : Fight fire from maximum distance or protected area. Cool and use caution when approaching or handling fire-exposed containers. Wear full protective clothing and positive pressure self-contained breathing apparatus. In case of fire and/or explosion do not breathe fumes.

Flash point : < -6.8 °C
< 19.76 °F
Method: Tag Closed Cup (TCC)
Note: Propellant

Lower explosion limit	:	Note: no data available
Upper explosion limit	:	Note: no data available
NFPA Classification	:	NFPA Level 1 Aerosol

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	:	Remove all sources of ignition. Wear personal protective equipment.
Environmental precautions	:	Outside of normal use, avoid release to the environment.
Methods for cleaning up	:	If damage occurs to aerosol can: Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13). Use only non-sparking equipment. Clean residue from spill site.

7. HANDLING AND STORAGE

Handling

Advice on safe handling	:	Do not puncture or incinerate. Avoid breathing vapors, mist or gas. Do not spray toward face. Do not use in areas without adequate ventilation. Note: Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. For more information visit www.inhalant.org. Use only as directed. KEEP OUT OF REACH OF CHILDREN AND PETS.
Advice on protection against fire and explosion	:	Keep away from heat and sources of ignition.

Storage

Requirements for storage areas and containers	:	Do not store at temperatures above 120 Deg. F (50 Deg C), as container may burst. Keep in a dry, cool and well-ventilated place.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

Components	CAS-No.	mg/m3	ppm	Non-standard units	Basis
Isobutane	75-28-5	-	1,000 ppm	-	ACGIH TWA
Propane	74-98-6	-	1,000 ppm	-	ACGIH TWA

Personal protective equipment

Respiratory protection

Industrial setting : No personal respiratory protective equipment normally required.

Household setting : Use only with adequate ventilation.

Hand protection : No special requirements.

Eye protection

Industrial setting : No special requirements.

Household setting : Avoid contact with eyes.

Skin and body protection : No special requirements.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form : aerosol

Color : clear

Odor : pleasant

pH : not applicable

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Boiling point	:	not applicable
Freezing point	:	not applicable
Flash point	:	< -6.8 °C < 19.76 °F Method: Tag Closed Cup (TCC) Propellant
Evaporation rate	:	no data available
Autoignition temperature	:	not applicable
Lower explosion limit	:	no data available
Upper explosion limit	:	no data available
Vapour pressure	:	no data available
Density	:	0.84 g/cm3
Water solubility	:	completely soluble
Partition coefficient: n-octanol/water	:	no data available
Viscosity, dynamic	:	no data available
Volatile Organic Compounds (California Air Resource Board – CARB) Total VOC (wt. %)	:	24.6 % - does not include any applicable regulatory exemptions

10. STABILITY AND REACTIVITY

Conditions to avoid	:	Heat, flames and sparks.
Materials to avoid	:	Strong oxidizing agents
Hazardous decomposition products	:	Thermal decomposition can lead to release of irritating gases and vapours.
Hazardous reactions	:	Stable under recommended storage conditions.

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11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	:	LD50 estimated > 5,000 mg/kg
Acute inhalation toxicity	:	LC50 estimated > 2 mg/l
Acute dermal toxicity	:	LD50 estimated > 2,000 mg/kg

Chronic effects

Carcinogenicity	:	no data available
Mutagenicity	:	no data available
Reproductive effects	:	no data available
Teratogenicity	:	no data available
Sensitisation	:	no data available

12. ECOLOGICAL INFORMATION

Ecotoxicity effects	:	no data available

13. DISPOSAL CONSIDERATIONS

Observe all applicable Federal, Provincial and State regulations and Local/Municipal ordinances regarding disposal.
Consumer may discard empty container in trash, or recycle where facilities exist.

RCRA waste class	:	D001 (Ignitable Waste)

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14. TRANSPORT INFORMATION

Land transport

- **U.S. DOT and Canadian TDG Surface Transportation:**

Proper shipping name	UN 1950 AEROSOLS, Flammable, 2.1
Class:	2.1
UN number	1950
Packaging group:	None.
Note:	Limited quantities derogation may be applicable to this product, please check transport documents.

Sea transport

- *IMDG:*

Proper shipping name	UN 1950 AEROSOLS, Flammable, 2.1
Class:	2
UN number:	1950
Packaging group:	None.
EmS:	F-D, S-U
Note:	Limited quantities derogation may be applicable to this product, please check transport documents.

Air transport

- *ICAO/IATA:*

Proper shipping name	UN 1950 AEROSOLS, Flammable, 2.1
Class:	2.1
UN/ID No.:	UN 1950
Packaging group:	None.
Note:	SC Johnson typically does not ship products via air, therefore it has not been determined if the product container meets current IATA/ICAO package criteria. Refer to IATA/ICAO Dangerous Goods Regulations for detailed instructions when shipping this item by air.

15. REGULATORY INFORMATION

Notification status	:	All ingredients of this product are listed or are excluded from listing on the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.
Notification status	:	All ingredients of this product comply with the New Substances Notification requirements under the Canadian Environmental Protection Act (CEPA).
California Prop. 65	:	This product is not subject to the reporting requirements under California's Proposition 65.

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Canada Regulations : This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

16. OTHER INFORMATION

HMIS Ratings

Health	1
Flammability	4
Reactivity	0

NFPA Ratings

Health	1
Fire	4
Reactivity	0
Special	

Further information
This document has been prepared using data from sources considered to be technically reliable. It does not constitute a warranty, expressed or implied, as to the accuracy of the information contained herein. Actual conditions of use are beyond the seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

Prepared by:	SC Johnson Global Safety Assessment & Regulatory Affairs (GSARA)

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MAGIC AMERICAN -- GOO-GONE STAIN REMOVER
MATERIAL SAFETY DATA SHEET
NSN: 793000F040026
Manufacturer's CAGE: 31772
Part No. Indicator: A
Part Number/Trade Name: GOO-GONE STAIN REMOVER

General Information

Company's Name: MAGIC AMERICAN CORPORATION
Company's Street: 23700 MERCANTILE RD
Company's City: CLEVELAND
Company's State: OH
Company's Country: US
Company's Zip Code: 44122-5902
Company's Emerg Ph #: 800-321-6330
Company's Info Ph #: 800-321-6330
Record No. For Safety Entry: 001
Tot Safety Entries This Stk#: 001
Status: SE
Date MSDS Prepared: 31OCT94
Safety Data Review Date: 23MAY95
Preparer's Company: MAGIC AMERICAN CORPORATION
Preparer's St Or P. O. Box: 23700 MERCANTILE RD
Preparer's City: CLEVELAND
Preparer's State: OH
Preparer's Zip Code: 44122-5902
MSDS Serial Number: BXKVR

Ingredients/Identity Information

Proprietary: NO
Ingredient: PETROLEUM NAPHTHA
Ingredient Sequence Number: 01
NIOSH (RTECS) Number: 1006079PN

Proprietary: NO
Ingredient: CITRUS OIL
Ingredient Sequence Number: 02
NIOSH (RTECS) Number: 1007650CO

Physical/Chemical Characteristics

Appearance And Odor: ORANGE-YELLOW LIQUIDW/FAINT CITRUS ODOR.
Vapor Pressure (MM Hg/70 F): 43.7

Specific Gravity: 0.764
Evaporation Rate And Ref: (BU AC =1): <0.1
Solubility In Water: MISCIBLE
pH: 5.7

Fire and Explosion Hazard Data

Flash Point: 133F
Flash Point Method: PMCC
Extinguishing Media: FOAM, DRY CHEMICAL, CO2, WATER SPRAY/FOG.
Special Fire Fighting Proc: USE SELF CONTAINED BREATHING APPARATUS FOR ENCLOSED AREA/WHEN HEATED MATERIAL BECOMES HIGHLY FLAMMABLE.
Unusual Fire And Expl Hazrds: COMBUSTIBLE.

Reactivity Data

Stability: YES
Materials To Avoid: OXIDIZING MATERIALS.
Hazardous Poly Occur: NO

Health Hazard Data

LD50-LC50 Mixture: ORAL LD50(RAT): >5 G/KG
Route Of Entry - Inhalation: NO
Route Of Entry - Skin: NO
Route Of Entry - Ingestion: NO
Health Haz Acute And Chronic: PRODUCT DOES CONTAIN PETROLEUM DISTILLATES & IS AN ASPIRATION HAZARD. THIS MATERIAL CAN ENTER LUNGS DURING SWALLOWING/
VOMITING & CAUSE LUNG INFLAMMATION & DAMAGE.
Carcinogenicity - NTP: NO
Carcinogenicity - IARC: NO
Carcinogenicity - OSHA: NO
Explanation Carcinogenicity: NONE
Signs/Symptoms Of Overexp: THIS PRODUCT DOES CONTAIN PETROLEUM DISTILLATES & IS AN ASPIRATION HAZARD. THIS MATERIAL CAN ENTER THE LUNGS DURING SWALLOWING/VOMITING & CAUSE LUNG INFLAMMATION & DAMAGE.
Emergency/First Aid Proc: INGESTION: ASPIRATION HAZARD. DONT'T INDUCE VOMTING. SKIN: WASH W/SOAP & WATER. OBTAIN MEDICAL ATTENTION IN ALL CASES.

Precautions for Safe Handling and Use

Steps If Matl Released/Spill: PICK UP W/SORBANT MATERIAL. FOLLOW PROPER METHODS FOR THE DISPOSAL OF LARGE QUANTITIES OF FLAMMABLE MATERIALS. USE

CAUTION WHERE SURFACES MAY BECOME SLIPPERY FROM MATERIAL.
Waste Disposal Method: DISPOSE OF IAW/FEDERAL, STATE & LOCAL REGULATIONS. FLAMMABLE LIQUID UN 1268.
Precautions-Handling/Storing: KEEP AWAY FROM OXIDIZING MATERIALS (CHLORINE, STRONG ACIDS). STORE IN A COOL, WELL VENTILATED AREA & AWAY FROM
OPEN FLAME.
Other Precautions: STORE AWAY FROM DEVICES CAPABLE OF GENERATING AN ELECTRIC SPARK. AVOID EXCESSIVE & PROLONGED DAILY SKIN CONTACT.

Control Measures

Respiratory Protection: IN AREAS OF INADEQUATE VENTILATION, ORGANIC VAPOR CARTRIDGE ARE APPROPRIATE IF RESPIRATOR PROTECTION IS PERFERRED BY THE HANDLER.
Ventilation: REQUIRED
Protective Gloves: CHEMICAL RESISTANT (NON-DISPOSABLE).
Eye Protection: SPLASH GOGGLES

Transportation Data

Disposal Data

Label Data

Label Required: YES
Label Status: G
Common Name: GOO-GONE STAIN REMOVER
Special Hazard Precautions: PRODUCT DOES CONTAIN PETROLEUM DISTILLATES & IS AN ASPIRATION HAZARD. THIS MATERIAL CAN ENTER LUNGS DURING SWALLOWING/
VOMITING & CAUSE LUNG INFLAMMATION & DAMAGE. THIS PRODUCT DOES CONTAIN PETROLEUM DISTILLATES & IS AN ASPIRATION HAZARD. THIS MATERIAL CAN ENTER THE LUNGS DURING SWALLOWING/VOMITING & CAUSE LUNG INFLAMMATION & DAMAGE.
Label Name: MAGIC AMERICAN CORPORATION
Label Street: 23700 MERCANTILE RD
Label City: CLEVELAND

Label State: OH
Label Zip Code: 44122-5902
Label Country: US
Label Emergency Number: 800-321-6330

SAFETY DATA SHEET

Helium

Section 1. Identification

GHS product identifier : Helium

Chemical name : Helium

Other means of identification : helium (dot); Helium-4; He; o-Helium; UN 1046

Product use : Synthetic/Analytical chemistry.

Synonym : helium (dot); Helium-4; He; o-Helium; UN 1046

SDS # : 001025

Supplier's details : Airgas USA, LLC and its affiliates
259 North Radnor-Chester Road
Suite 100
Radnor, PA 19087-5283
1-610-687-5253

Emergency telephone number (with hours of operation) : 1-866-734-3438

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : GASES UNDER PRESSURE - Compressed gas

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : Contains gas under pressure; may explode if heated.
May displace oxygen and cause rapid suffocation.

Precautionary statements

General : Read and follow all Safety Data Sheets (SDS'S) before use. Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand. Close valve after each use and when empty. Use equipment rated for cylinder pressure. Do not open valve until connected to equipment prepared for use. Use a back flow preventative device in the piping. Use only equipment of compatible materials of construction.

Prevention : Use and store only outdoors or in a well ventilated place.

Response : Not applicable.

Storage : Protect from sunlight. Protect from sunlight when ambient temperature exceeds 52°C/125°F. Store in a well-ventilated place.

Disposal : Not applicable.

Hazards not otherwise classified : In addition to any other important health or physical hazards, this product may displace oxygen and cause rapid suffocation.

Section 3. Composition/information on ingredients

Substance/mixture : Substance

Chemical name : Helium

Other means of identification : helium (dot); Helium-4; He; o-Helium; UN 1046

CAS number/other identifiers

CAS number : 7440-59-7

Product code : 001025

Ingredient name	%	CAS number
Helium	100	7440-59-7

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : As this product is a gas, refer to the inhalation section.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Contact with rapidly expanding gas may cause burns or frostbite.

Inhalation : No known significant effects or critical hazards.

Skin contact : Contact with rapidly expanding gas may cause burns or frostbite.

Frostbite : Try to warm up the frozen tissues and seek medical attention.

Ingestion : As this product is a gas, refer to the inhalation section.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Section 4. First aid measures

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : Contains gas under pressure. In a fire or if heated, a pressure increase will occur and the container may burst or explode.

Hazardous thermal decomposition products : No specific data.

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Contact supplier immediately for specialist advice. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Avoid breathing gas. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Ensure emergency procedures to deal with accidental gas releases are in place to avoid contamination of the environment. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Immediately contact emergency personnel. Stop leak if without risk.

Large spill : Immediately contact emergency personnel. Stop leak if without risk. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Contains gas under pressure. Avoid contact with eyes, skin and clothing. Avoid breathing gas. Empty containers retain product residue and can be hazardous. Do not puncture or incinerate container. Use equipment rated for cylinder pressure. Close valve after each use and when empty. Protect cylinders from physical damage; do not drag, roll, slide, or drop. Use a suitable hand truck for cylinder movement.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Keep container tightly closed and sealed until ready for use. Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Cylinder temperatures should not exceed 52 °C (125 °F).

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Helium	Oxygen Depletion [Asphyxiant]

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Section 8. Exposure controls/personal protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Gas. [Compressed gas.]

Color : Colorless.

Molecular weight : 4 g/mole

Molecular formula : He

Boiling/condensation point : -268.9°C (-452°F)

Melting/freezing point : -272.2°C (-458°F)

Critical temperature : -267.9°C (-450.2°F)

Odor : Odorless.

Odor threshold : Not available.

pH : Not available.

Flash point : [Product does not sustain combustion.]

Burning time : Not applicable.

Burning rate : Not applicable.

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : 0.14 (Air = 1) Liquid Density@BP: 7.8 lb/ft3 (125 kg/m3)

Specific Volume (ft^3/lb) : 96.1538

Gas Density (lb/ft^3) : 0.0104

Relative density : Not applicable.

Solubility : Not available.

Solubility in water : Not available.

Partition coefficient: n-octanol/water : 0.28

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Section 9. Physical and chemical properties

SADT : Not available.

Viscosity : Not applicable.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Not available.

Irritation/Corrosion

Not available.

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Section 11. Toxicological information

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Contact with rapidly expanding gas may cause burns or frostbite.

Inhalation : No known significant effects or critical hazards.

Skin contact : Contact with rapidly expanding gas may cause burns or frostbite.

Ingestion : As this product is a gas, refer to the inhalation section.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Not available.

Persistence and degradability

Not available.

Section 12. Ecological information

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Helium	0.28	-	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Empty Airgas-owned pressure vessels should be returned to Airgas. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Section 14. Transport information

	DOT	TDG	Mexico	IMDG	IATA
UN number	UN1046	UN1046	UN1046	UN1046	UN1046
UN proper shipping name	HELIUM, COMPRESSED	HELIUM, COMPRESSED	HELIUM, COMPRESSED	HELIUM, COMPRESSED	HELIUM, COMPRESSED
Transport hazard class(es)	2.2 	2.2 	2.2 	2.2 	2.2 
Packing group	-	-	-	-	-
Environment	No.	No.	No.	No.	No.
Additional information	**Limited quantity** Yes. **Packaging instruction** **Passenger aircraft** Quantity limitation: 75 kg **Cargo aircraft** Quantity limitation: 150 kg	**Explosive Limit and Limited Quantity Index** 0.125 **Passenger Carrying Road or Rail Index** 75	-	-	**Passenger and Cargo Aircraft**Quantity limitation: 75 kg **Cargo Aircraft Only** Quantity limitation: 150 kg

"Refer to CFR 49 (or authority having jurisdiction) to determine the information required for shipment of the product."

Section 14. Transport information

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption**: Not determined

United States inventory (TSCA 8b): This material is listed or exempted.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Sudden release of pressure

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Helium	100	No.	Yes.	No.	No.	No.

State regulations

Massachusetts : This material is listed.

New York : This material is not listed.

New Jersey : This material is listed.

Pennsylvania : This material is listed.

Canada inventory : This material is listed or exempted.

International regulations

Section 15. Regulatory information

International lists : **Australia inventory (AICS)**: This material is listed or exempted.
China inventory (IECSC): This material is listed or exempted.
Japan inventory: Not determined.
Korea inventory: This material is listed or exempted.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): This material is listed or exempted.
Philippines inventory (PICCS): This material is listed or exempted.
Taiwan inventory (CSNN): Not determined.

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

Canada

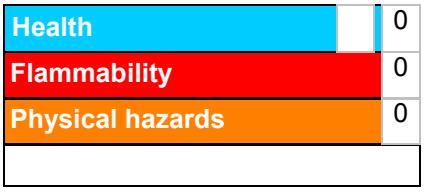
WHMIS (Canada) : Class A: Compressed gas.

CEPA Toxic substances: This material is not listed.
Canadian ARET: This material is not listed.
Canadian NPRI: This material is not listed.
Alberta Designated Substances: This material is not listed.
Ontario Designated Substances: This material is not listed.
Quebec Designated Substances: This material is not listed.

Section 16. Other information

Canada Label requirements : Class A: Compressed gas.

Hazardous Material Information System (U.S.A.)



Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Section 16. Other information

History

Date of printing : 10/15/2014.

Date of issue/Date of revision : 10/15/2014.

Date of previous issue : 10/2/2014.

Version : 0.02

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United NationsACGIH – American Conference of Governmental Industrial Hygienists
AIHA – American Industrial Hygiene Association
CAS – Chemical Abstract Services
CEPA – Canadian Environmental Protection Act
CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act (EPA)
CFR – United States Code of Federal Regulations
CPR – Controlled Products Regulations
DSL – Domestic Substances List
GWP – Global Warming Potential
IARC – International Agency for Research on Cancer
ICAO – International Civil Aviation Organisation
Inh – Inhalation
LC – Lethal concentration
LD – Lethal dosage
NDSL – Non-Domestic Substances List
NIOSH – National Institute for Occupational Safety and Health
TDG – Canadian Transportation of Dangerous Goods Act and Regulations
TLV – Threshold Limit Value
TSCA – Toxic Substances Control Act
WEEL – Workplace Environmental Exposure Level
WHMIS – Canadian Workplace Hazardous Material Information System

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Spartan Chemical Company, Inc.
Material Safety Data Sheet

SECTION I: PRODUCT INFORMATION

Product Name or Number (as it appears on label):
HEPACIDE QUAT II
Product Number: 3251; 1251

Product Division:
Janitorial

Spartan Chemical Company , Inc.
1110 Spartan Drive
Maumee OH 43537

Product/Technical Information: **1-(800)-537-8990**
Medical Emergency: **1-(888)-314-6171 (24 hours)**
Chemical Leak/Spill Emergency: **CHEMTREC 1-(800) 424-9300 (24 hours)**

Shipping Description: Non-Hazardous Products

NFPA Ratings:	HMIS Ratings:
Health: 1- Slight	**Health:** 1- Slight
Fire: 0 - Minimal	**Fire:** 0 - Minimal
Reactivity: 0 - Minimal	**Reactivity:** 0 - Minimal
	Pers. Prot. Equip.: See Section VIII

SECTION II: HAZARDOUS INGREDIENTS

(Listed when present at 1% or greater, carcinogens at 0.1% or greater) All component chemicals are listed or exempted from listing on the "TSCA Inventory" of chemical substances maintained by the U.S. Environmental Protection Agency.

Chemical Name(s)	%Wt	CAS Registry No.	Table Z-1-A TWA mg/m^3	Table Z-1-A STEL mg/m^3	Table Z-1-A CEILING mg/m^3	NTP, IARC or OSHA Carcinogen
Dialkyl dimethyl ammonium chloride	< 1.0 -	68424-95-3 -	Not Established -	Not Established -	Not Established -	No -
Alkyl dimethyl benzyl ammonium chloride	< 1.0 -	68424-85-1 -	Not Established -	Not Established -	Not Established -	No -

SECTION III: PHYSICAL DATA

Boiling Point:	210 °F	Vapor Pressure:	Unknown
Vapor Density (AIR = 1):	Unknown	Solubility in Water:	Complete
pH:	6.0-7.0	Specific Gravity (H_2O=1):	0.995 @ 75 F
Evaporation Rate (but.ace.=1):	<1	Percent Solid by Weight:	1-5
Physical State:	Liquid		
Appearance & Odor:	Clear liquid, mild odor		

SECTION IV: FIRE & EXPLOSIVE HAZARD DATA

Flash Point:	> 210°F	Method Used:	ASTM-D56
Flammable Limits:	NA	Flame Extension:	N/A
Extinguishing Media:	Product does not support combustion. Use extinguishing media appropriate for surrounding fire.		
Special Fire Fighting Procedures:	Wear NIOSH approved self-contained breathing apparatus and protective clothing. Cool fire-exposed containers with water spray.		
Unusual Fire & Explosive Hazards:	Products of combustion are toxic.		

SECTION V: HEALTH HAZARD DATA

Threshold Limit Value:	Not Established	Primary Routes of Entry:	Inhalation, Skin Contact, Eyes and Ingestion

Effects of Overexposure- Conditions to Avoid:	**Causes moderate eye irritation. Harmful if absorbed through the skin. May be harmful if swallowed. Inhalation of product mist may cause respiratory irritation .** Avoid contact with eyes, skin or clothing. Do not swallow. Avoid breathing product mist. Wash thoroughly with soap and water after handling.
Conditions Aggravated by Use:	Use of this product may aggravate preexisting skin; eye and respiratory disorders including asthma and dermatitis.
Emergency & First Aid Procedures:	
Eyes:	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses; If present after the first 5 minutes; then continue rinsing eye. Call a poison control center or doctor for treatment advice.
Skin:	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
Ingestion:	Do not induce vomiting. Drink one or two glasses of water to dilute product. Call a poison control center or doctor for treatment advice. Do not give anything by mouth to an unconscious person.
Inhalation:	In case of respiratory irritation; move person to fresh air. Get medical attention if irritation persists.

SECTION VI: REACTIVITY DATA

Stability:	Stable	Incompatible Materials:	Strong oxidizers
Hazardous Decomposition Products:	None	Hazardous Polymerization:	Will Not Occur

SECTION VII: SPILL OR LEAK PROCEDURES

Steps to be Taken in Case Material is Released or Spilled:	Small spills of one gallon or less may be flushed with plenty of water to sanitary sewer system (If permitted by local sewer regulations). Dike and contain large spills with inert material and transfer liquid to containers for disposal. Keep spill out of storm sewers and waterways.
Waste Disposal Method:	Dispose of in compliance with all federal, state and local laws and regulations.

SECTION VIII: SPECIAL PROTECTION INFORMATION

Respiratory Protection:	Not normally required when good general ventilation is provided. However, if exposure limits (see Section II) are exceeded or if respiratory irritation occurs, use of a NIOSH approved respirator suitable for the use-conditions and chemicals in Section II should be considered.
Ventilation:	Provide good general ventilation. Local exhaust ventilation may be necessary for some operations.
Protective Gloves(Specify Type):	Rubber or other Impervious gloves are recommended for frequent or prolonged contact.
Eye Protection(Specify Type):	Splash goggles or safety glasses are recommended.
Other Protective Equipment:	See 29 CFR 1910.132-138

SECTION IX: SPECIAL PRECAUTIONS

Precautions; Handling & Storing:	Keep out of reach of children
Other Precautions:	NA

HEPACIDE QUAT II
Ref: 29 CFR 1910.1200 (OSHA)

Name:	Ronald T. Cook	Title:	Manager, Regulatory Affairs
Effective Date:	06/08/2012	Supercedes:	12/22/2009
Changes:	General Review		

The Hope Company

MATERIAL SAFETY DATA SHEET

May be used to comply with OSHA's Hazard Communication Standard,
29CFR 1910.1200. Standard must be consulted for specific requirements.

DATE PREPARED: 01/15/2003

HOPE'S Premium Home Care
STAINLESS STEEL POLISH

HAZARD RATING
HEALTH: 1 REACTIVITY: 0 FIRE: 0

SECTION 1 - MANUFACTURER'S INFORMATION

The Hope Company, Inc.
P.O. Box 749
Bridgeton, MO 63044 USA

EMERGENCY PHONE NUMBER: 800-940-4736
OTHER INFORMATION CALLS: 314-739-7254

SECTION 2 - HAZARDOUS INGREDIENTS/IDENTITY

Diethylenetriaminepentaacetic acid, pentasodium salt	< 0.02%
DMDM Hydantoin	< 0.3%
Aminomethylpropanol	< 0.5%

SECTION 3 - PHYSICAL AND CHEMICAL CHARACTERISTICS

SPECIFIC GRAVITY: 1.170 BOILING POINT: NA VAPOR DENSITY (Air =1): NA
SOLUBILITY IN WATER: SOLUBLE IN WATER VAPOR PRESSURE (MM HG): NA
REACTIVITY IN WATER: NONE MELTING POINT: NA
APPEARANCE: OFF-WHITE POURABLE LIQUID
ODOR: HERBAL TYPE

SECTION 4 - FIRE AND EXPLOSION DATA

FLASHPOINT: >200F METHOD USED: TCC
FLAMMABLE LIMITS IN AIR % BY VOLUME LEL LOWER: NOT DETERMINED UEL UPPER: NOT DETERMINED
AUTO IGNITION TEMPERATURE: NA EXTINGUISHER MEDIA: FOAM, DRY CHEMICAL, CARBON DIOXIDE
SPECIAL FIRE FIGHTING PROCEDURES: SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING SHOULD BE WORN WHEN FIGHTING FIRES INVOLVING CHEMICALS.
UNUSUAL FIRE AND EXPLOSION HAZARDS: NONE

.

SECTION 5 - PHYSICAL HAZARDS (REACTIVITY DATA)

STABILITY: STABLE UNDER NORMAL CONDITIONS OF HANDLING..
INCOMPATABILITY (MATERIALS TO AVOID): NONE KNOWN

HAZARDOUS DECOMPOSITION PRODUCTS: NONE KNOWN.
HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

THE HOPE COMPANY

MATERIAL SAFETY DATA SHEET

May be used to comply with OSHA's Hazard Communication Standard,
29CFR 1910.1200. Standard must be consulted for specific requirements.

HOPE'S Premium Home Care
STAINLESS STEEL POLISH

SECTION 6 - HEALTH HAZARDS

1. ACUTE: PROLONGED EXPOSURE TO SKIN AND EYES MAY CAUSE IRRITATION. MAY CAUSE STOMACH DISTRESS, NAUSEA OR VOMITING IF SWALLOWED.

2. CHRONIC: NONE KNOW

SIGNS AND SYMPTOMS OF EXPOSURE: SKIN OR EYE IRRITATION, NAUSEA OR VOMITING MAY OCCUR

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE TO THIS PRODUCT HAVE NOT BEEN ESTABLISHED. UNNECESSARY EXPOSURE TO THIS PRODUCT OR ANY CHEMICAL SHOULD BE AVOIDED.

CHEMICAL LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN: NO

NATIONAL TOXICOLOGY PROGRAM: NO I.A.R.C. MONOGRAPHS: NO OSHA: NO

EMERGENCY AND FIRST AID PROCEDURES: IF IRRITATION OR DISCOMFORT PERSISTS, CONTACT A PHYSICIAN.

ROUTES OF ENTRY

1. INHALATION: REMOVE TO FRESH AIR.

2. EYES: FLUSH THOROUGHLY WITH WATER TO REDUCE IRRITATION. REMOVE CONTACT LENSES. CONTINUE FLUSHING FOR 15 MINUTES AND SEEK MEDICAL ATTENTION.

3. SKIN: WASH THOROUGHLY WITH SOAP AND WATER, FLUSH SKIN WITH COOL RUNNING WATER.

4. INGESTION: MAY CAUSE MOUTH, THROAT, ESOPHAGUS, AND STOMACH IRRITATION.

IF SWALLOWED, SEEK MEDICAL ATTENTION IMMEDIATELY

SECTION 7 - SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: STORE IN A COOL, DRY, VENTILATED AREA IN ORIGINAL CLOSED CONTAINER OUT OF SUNLIGHT AND/OR HEAT.

OTHER PRECAUTIONS: FOLLOW STANDARD INDUSTRIAL HYGIENE PRACTICES

WASTE DISPOSAL METHODS: DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.

SECTION 8 - SPECIAL PROTECTION INFORMATION/CONTROL MEASURES

RESPIRATORY PROTECTION: NONE NORMALLY REQUIRED

VENTILATION: NORMAL

PROTECTIVE GLOVES: NOT NORMALLY REQUIRED BUT CAN BE USED TO AVOID SKIN IRRITATION.

EYE PROTECTION: SAFETY GLASSES OR GOGGLES CAN BE USED TO AVOID EYE CONTACT.

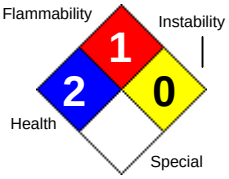
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: NONE NORMALLY REQUIRED.

WORK/HYGENIC PRACTICES: STANDARD INDUSTRIAL HYGIENE PRACTICES

MATERIAL SAFETY DATA SHEET

Klean Strip Adhesive Remover / Klean Strip Premium Stripper

HEALTH	2
FLAMMABILITY	1
PHYSICAL HAZ.	0
PPE	X



Printed: 11/19/2009
Revision: 10/13/2009

Date Created: 10/13/2009

1. Product and Company Identification

Product Code: 4015.23

Product Name: Klean Strip Adhesive Remover / Klean Strip Premium Stripper

Manufacturer Information

Company Name: W. M. Barr
2105 Channel Avenue
Memphis, TN 38113

Phone Number: (901)775-0100

Emergency Contact: 3E 24 Hour Emergency Contact (800)451-8346

Information: W.M. Barr Customer Service (800)398-3892

Web site address: www.wmbarr.com

Preparer Name: W.M. Barr EHS Dept (901)775-0100

Intended Use: Removal of adhesives, mastics, & contact cement from wood, concrete, metal and masonry.

Synonyms

GKAS94325, QKAS94326, QKAS94326L, GKS3, QKS3, QKS3L, QKS34

2. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	OSHA TWA	ACGIH TWA	Other Limits
1. Dichloromethane {Methylene chloride}	75-09-2	60.0 -100.0 %	25 ppm	50 ppm	No data.
2. Methanol {Methyl alcohol; Carbinol; Wood alcohol}	67-56-1	7.0 -13.0 %	200 ppm	200 ppm	No data.
3. Stoddard solvent {Mineral spirits; Aliphatic Petroleum Distillates; White spirits}	8052-41-3	1.0 -5.0 %	500 ppm	100 ppm	No data.

Hazardous Components (Chemical Name)	RTECS #	OSHA STEL	OSHA CEIL	ACGIH STEL	ACGIH CEIL
1. Dichloromethane {Methylene chloride}	PA8050000	125 ppm (15 min)	No data.	No data.	No data.
2. Methanol {Methyl alcohol; Carbinol; Wood alcohol}	PC1400000	No data.	No data.	250 ppm	No data.
3. Stoddard solvent {Mineral spirits; Aliphatic Petroleum Distillates; White spirits}	WJ8925000	No data.	No data.	No data.	No data.

3. Hazards Identification

Emergency Overview

Danger! Poison. May be fatal or cause blindness if swallowed. Eye and skin irritant. Vapor Harmful. Use only with adequate ventilation to prevent buildup of vapors.

OSHA Regulatory Status:

This material is classified as hazardous under OSHA regulations.

Potential Health Effects (Acute and Chronic)

INHALATION ACUTE EXPOSURE EFFECTS:

Vapor harmful. May cause upper respiratory tract irritation and central nervous system depression with symptoms such as confusion, lightheadedness, nausea, vomiting, headache, drowsiness, and fatigue. Mist or vapor can irritate the throat and lungs. Causes formation of carbon monoxide in blood which may affect the cardiovascular system and central nervous system. Continued exposure may cause unconsciousness and even death. Intentional misuse of this product by deliberately concentrating and inhaling the vapors can be harmful or fatal. Concurrent exposure to carbon monoxide, smoking, and physical activity may increase the level of carboxyhemoglobin levels in the blood resulting in additive effects. This product is a simple asphyxiant.

SKIN CONTACT ACUTE EXPOSURE EFFECTS:
This product is a skin irritant. Product may be absorbed through the skin. Harmful if absorbed through the skin. Effects may range from mild irritation to severe pain, and possibly burns, depending on the intensity of contact. Prolonged or repeated contact may dry the skin and cause irritation. Symptoms include redness, itching, burning, drying and cracking of the skin, and skin burns.

EYE CONTACT ACUTE EXPOSURE EFFECTS:
This material is an eye irritant. Vapors may irritate the eyes. Contact may cause tearing, redness, a stinging or burning feeling, swelling, and blurred vision.

INGESTION ACUTE EXPOSURE EFFECTS:
Poison. May be fatal or cause blindness if swallowed. May cause nausea or vomiting. Aspiration hazard. This material may be aspirated into the lungs during vomiting. If vomiting results in aspiration, chemical pneumonia could occur. It can be readily absorbed by the stomach and intestinal tract. Absorption through the gastrointestinal tract may produce central nervous system depression and systemic effects. Swallowing this material may irritate the mucous membranes of the mouth, throat, and esophagus. May cause cyanosis (blue coloring of the skin and nails from lack of oxygen).

CHRONIC EXPOSURE EFFECTS:
Reports have associated repeated and prolonged overexposure to solvents with neurological and other physiological damage. Prolonged skin contact may cause irritation, redness, swelling and possible tissue destruction. Prolonged or repeated contact may cause dermatitis. Prolonged skin contact may result in absorption of a harmful amount of this material. May cause liver damage. May cause cancer based on animal data (see Section 11. Toxicological Information).

Target Organs:
Blood, central nervous system, liver, skin, cardiovascular system, eyes.

Signs and Symptoms Of Exposure

See Potential Health Effects.

Medical Conditions Generally Aggravated By Exposure

Heart of cardiovascular disorders, kidney disorders, liver disorders, central nervous system disorders, respiratory system (including asthma and other breathing disorders), skin disorders and allergies.

Alcohol may enhance the toxic effects of methylene chloride exposure. May cross the placenta. May be excreted in breast milk.

4. First Aid Measures

Emergency and First Aid Procedures

INHALATION:
If user experiences breathing difficulty, move to air free of vapors. Administer oxygen or artificial respiration until medical assistance can be rendered.

SKIN CONTACT:
Wash with soap and large quantities of water and seek medical attention if irritation from contact persists.

EYE CONTACT:
Immediately flush with water, remove any contact lens, continue flushing with water for at least 15 minutes. Get medical attention immediately.

INGESTION:
Do not induce vomiting, unless directed to by medical personnel. Call your poison control center, hospital,

emergency room, or physician immediately for instructions. Do not give anything by mouth to an unconscious person.

Note to Physician

This product contains methylene chloride and methanol.

This product contains methanol which can cause intoxication and central nervous system depression. Methanol is metabolized to formic acid and formaldehyde. These metabolites can cause metabolic acidosis, visual disturbances and blindness. Since metabolism is required for these toxic symptoms, their onset may be delayed from 6 to 30 hours following ingestion. Ethanol competes for the same metabolic pathway and has been used to prevent methanol metabolism. Ethanol administration is indicated in symptomatic patients or at blood methanol concentrations above 20 ug/dl. Methanol is effectively removed by hemodialysis.
Adrenalin should never be given to a person overexposed to methylene chloride.

Methylene Chloride is an aspiration hazard. Risk of aspiration must be weighed against possible toxicity of the material when determining whether to induce emesis or to perform gastric lavage. This material sensitizes the heart to the effects of sympathomimetic amines. Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in individuals exposed to this material. This material is metabolized to carbon monoxide. Consequently, elevations in carboxyhemoglobin as high as 50% have been reported, and levels may continue to rise for several hours after exposure has ceased. Data in experimental animals suggest there is a narrow margin between concentrations causing anesthesia and death.

5. Fire Fighting Measures

Flammability Classification: NFPA Class IIIB
Flash Pt: NP
Explosive Limits: LEL: No data. UEL: No data.

Fire Fighting Instructions

Self-contained respiratory protection should be provided for fire fighters fighting fires in buildings or confined areas. Storage containers exposed to fire should be kept cool with water spray to prevent pressure build-up. Stay away from heads of containers that have been exposed to intense heat or flame.

Flammable Properties and Hazards

No flash to boil.

Contact of liquid or vapor with flame or hot surfaces will produce toxic gases and a corrosive residue that will cause deterioration of metal.

Vapors are heavier than air and will tend to collect in low areas.

Hazardous Combustion Products

Thermal decomposition or combustion may produce hydrogen chloride, chlorine, phosgene, and oxides of carbon.

Extinguishing Media

Use carbon dioxide, dry powder, water spray, or foam.

Unsuitable Extinguishing Media

None known.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled

Isolate the immediate area. Prevent unauthorized entry. Eliminate all sources of ignition in area and downwind of the spill area. Stay upwind, out of low areas, and ventilate closed spaces before entering. All equipment used when handling this product must be grounded or non-sparking. Do not touch or walk through spilled material. Stop leak if you can do so without risk. Prevent entry into waterways, sewers, or confined areas. A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand, or other non-combustible material and transfer to compatible containers.

7. Handling and Storage

Precautions To Be Taken in Handling

Read carefully all cautions and directions on product label before use. Since empty container retains residue, follow all label warnings even after container is empty. Dispose of empty container according to all regulations. Do not reuse this container.

Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. A source of clean water should be kept in the immediate work area for flushing of the eyes and skin.

Keep away from heat, sparks, flame, and any other source of ignition.

Do not smoke when anywhere near this material.

Ground and bond containers when transferring material.

Do not use in confined spaces, basements, bathrooms, etc, where vapors can build up and explode if ignited by an ignition source.

Vapors are heavier than air and will collect in low areas.

Precautions To Be Taken in Storing

Store in a cool place in original container and protect from sunlight. Exposure to high temperatures or prolonged exposure to sun may cause can to leak or swell. Once opened, remover should be used within six months or properly disposed of to avoid can deterioration. Do not store near flames or at elevated temperatures.

Keep container tightly closed when not in use.

8. Exposure Controls/Personal Protection

Respiratory Equipment (Specify Type)

For occasional consumer use - Use with adequate ventilation to prevent a build-up of vapors in confined areas. Open windows or position fans to provide cross ventilation. If a mild to strong odor is noticeable, ventilation is not adequate.

For OSHA controlled workplace and other regular users - Use only with adequate ventilation under engineered air control systems designed to prevent exceeding appropriate TLVs. For occasional use, where engineered air control is not feasible, use properly maintained and properly fitted NIOSH approved self-contained breathing apparatus for chlorinated solvent vapors. A dust mask does not provide protection against vapors.

Eye Protection

Safety glasses, chemical goggles, or face shields are recommended to safeguard against potential eye contact, irritation, or injury. Contact lenses should not be worn while working with chemicals.

Protective Gloves

Wear gloves with as much resistance to the chemical ingredients as possible. Laminate film gloves offer the best protection. Other glove materials will be degraded by methylene chloride, but may provide protection for some amount of time, based on the type of glove and the conditions of use. Consult your glove supplier for additional information. Gloves contaminated with product should be discarded and not reused.

Other Protective Clothing

Various application methods can dictate use of additional protective safety equipment, such as impermeable aprons, etc., to minimize exposure.

Engineering Controls (Ventilation etc.)

Use only with adequate ventilation to prevent buildup of vapors. Do not use in areas where vapors can accumulate and concentrate, such as basements, bathrooms or small enclosed areas.

Whenever possible, use outdoors in an open air area. If using indoors open all windows and doors and maintain a cross ventilation of moving fresh air across the work area. If strong odor is noticed or you experience slight dizziness, headache, nausea or eye-watering -- STOP -- ventilation is inadequate. Leave area immediately and move to fresh air.

Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Work/Hygienic/Maintenance Practices

A source of clean water should be available in the work area for flushing of the eyes and skin.

Wash hands thoroughly after use.
Do not eat, drink, or smoke in the work area.

Before reuse, thoroughly clean any clothing or protective equipment that has been contaminated by prior use.

Discard any clothing or other protective equipment that cannot be decontaminated, such as gloves or shoes.

9. Physical and Chemical Properties

Physical States:	[ ] Gas [X] Liquid [ ] Solid
Melting Point:	No data.
Boiling Point:	No data.
Autoignition Pt:	No data.
Flash Pt:	NP
Explosive Limits:	LEL: No data. UEL: No data.
Specific Gravity (Water = 1):	9.75 - 10.08
Density:	9.948 LB/GL
Bulk density:	No data.
Vapor Pressure (vs. Air or mm Hg):	25 MM HG at 68.0 F (20.0 C)
Vapor Density (vs. Air = 1):	No data.
Evaporation Rate (vs Butyl Acetate=1):	> 1
Solubility in Water:	No data.
Percent Volatile:	97.0 %
VOC / Volume:	172.0000 G/L
Heat Value:	No data.
Particle Size:	No data.
Corrosion Rate:	No data.
pH:	10.0 - 10.5

Appearance and Odor

Clear to white color.

10. Stability and Reactivity

Stability: Unstable [ ] Stable [X]

Conditions To Avoid - Instability

No data available.

Incompatibility - Materials To Avoid

Incompatible with strong oxidizing agents; bases; strong caustics; strong acids; oxygen; nitrogen peroxide; reactive metals such as aluminum and magnesium; sodium; potassium; and nitric acid.

Hazardous Decomposition Or Byproducts

Decomposition may produce carbon monoxide and carbon dioxide, hydrogen chloride, chlorine gas, and small quantities of phosgene.

Hazardous Polymerization: Will occur [ ] Will not occur [X]

Conditions To Avoid - Hazardous Polymerization

No data available.

11. Toxicological Information

This product has not been tested as a whole. Information below will be for individual ingredients.

Methylene Chloride:
ACUTE TOXICITY:
LC50 Rat inhalation 52 mg/L 4 hrs
LD50 Rat oral 985-1600 mg/kg
SKIN CORROSION / IRRITATION:
810 mg/24 hr skin rabbit - severe
100 mg/24 hr skin rabbit - moderate
SERIOUS EYE DAMAGE / IRRITATION:
162 mg eyes rabbit - moderate
10 mg eyes rabbit - mild
500 mg/24 hr eyes rabbit - mild
RESPIRATORY OR SKIN SENSITIZATION: Not a respiratory or skin sensitizer.
ASPIRATION HAZARD: Methylene chloride does present an aspiration hazard.
MUTAGENIC DATA: Positive results have been observed in the Ames test. In mammalian systems, responses have generally been negative.
IMMUNOTOXICITY: A study found there was no evidence of harm to the immune system of laboratory animals or reduced ability to combat disease.
NEUROTOXICITY: Tests in rats indicate no significant neurotoxic effects after exposure to concentrations up to 2,000 ppm for 90 days. No neurotoxic effects have been observed in humans at typical occupational exposure levels.
DEVELOPMENTAL/REPRODUCTIVE: No significant developmental effects were observed in female rats and mice exposed to 1,250 ppm during gestation. A similar result was observed in rats exposed to 4,500 ppm before and during gestation. A two-generation inhalation study showed no adverse reproductive effects in rats exposed to as much as 1,500 ppm for 14 weeks.
CARCINOGEN STATUS: Methylene chloride is carcinogenic in experimental animals at a relatively high dose, by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) that are not considered relevant to worker exposure. Available epidemiological studies do not confirm an increased risk of cancer in humans. Available evidence suggests that this material is not likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure.

Methanol:
ACUTE TOXICITY:
LD50 Rat oral 5628 mg/kg
LC50 Rat inhalation 64000 ppm/4 hr
LC50 Rat inhalation 87.5 mg/L/6 hr
LD50 Mouse oral 7300 mg/kg
SKIN CORROSION / IRRITATION: LD50 Rabbit dermal 15,800 mg/kg bw
SERIOUS EYE DAMAGE / IRRITATION: Methanol is a mild to moderate eye irritant.

RESPIRATORY OR SKIN SENSITIZATION: Not a respiratory or skin sensitizer.
ASPIRATION HAZARD: Methanol presents an aspiration hazard.
MUTAGENIC DATA: No data.
IMMUNOTOXICITY: No data.
NEUROTOXICITY: Overexposure to methanol has been suggested as causing central nervous system damage in laboratory animals.
DEVELOPMENTAL/REPRODUCTIVE: The inhalation of methanol by pregnant rodents throughout the period of embryogenesis induces a wide range of concentration-dependent teratogenic and embryolethal effects. Methanol has caused birth defects in laboratory animals, but only when inhaled at extremely high vapor concentrations. The relevance of this finding to humans is uncertain.
CARCINOGEN STATUS: There is no evidence from animal studies to suggest methanol is a carcinogen.

Stoddard Solvent:
ACUTE TOXICITY:
LD50 Rat oral >34,600 mg/kg
LC50 Rat Inhalation >21,400 mg/m3 / 4 hrs
LD50 Rabbit skin 15,400 mg/kg
SKIN CORROSION / IRRITATION: Primary dermal studies (4 hr exposure) in rabbits utilizing mineral spirits containing less than 2% aromatics resulted in slight to moderate skin irritation.
SERIOUS EYE DAMAGE / IRRITATION: In a 15 minute inhalation period, eye irritation, characterized as a slight dryness, was reported in one of six volunteers (ages 22-61 years) at 150 ppm (860 mg/cu m). At 470 ppm (2700 mg/cu m), ocular irritation was reported by all six volunteers.
RESPIRATORY OR SKIN SENSITIZATION: Skin sensitization was not evident in animal studies.
ASPIRATION HAZARD: This material presents an aspiration hazard.
MUTAGENIC DATA: No data.
IMMUNOTOXICITY: No data.
NEUROTOXICITY: Repeated exposure to elevated concentrations of hydrocarbon solvents can produce a variety of transient CNS effects (e.g., dizziness, headache, narcosis, etc.)
DEVELOPMENTAL/REPRODUCTIVE: There were no treatment-related effects on pregnancy rate, mortality or gross post mortem observations in animal studies utilizing mineral spirits containing less than 2% aromatics. In vivo and in vitro studies on mineral spirits containing up to 22% aromatics indicate that these products are not genotoxic.
CARCINOGEN STATUS: There is inadequate evidence for the carcinogenicity of petroleum solvents in humans. Animal studies have indicated that there may be some evidence of carcinogenic activity in male rats but no evidence in female rats. A low carcinogenic potential is suggested by a lack of genotoxic potential identified in in vivo and in vitro genetic toxicity tests.
OTHER ADVERSE EFFECTS: Chronic effects of ingestion and subsequent aspiration of mineral spirits into the lungs may cause pneumatocele (lung cavity) formation and chronic lung dysfunction.

Chronic Toxicological Effects

Reports have associated repeated and prolonged occupational overexposure to solvents with irreversible brain and nervous system damage.

Carcinogenicity/Other Information

No data available.

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. Dichloromethane {Methylene chloride}	75-09-2	Possible	2B	A3	Yes

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
2. Methanol {Methyl alcohol; Carbinol; Wood alcohol}	67-56-1	n.a.	n.a.	n.a.	n.a.
3. Stoddard solvent {Mineral spirits; Aliphatic Petroleum Distillates; White spirits}	8052-41-3	n.a.	n.a.	n.a.	n.a.

12. Ecological Information

No information available for this product as a whole.

Methylene Chloride:
TOXICITY: LC50 310 mg/L 96 hrs (static) Fathead Minnow; LC50 220 mg/L 96 hrs (static) Bluegill Sunfish; LC50 256 mg/L 96 hrs Mysid Shrimp
PERSISTENCE AND DEGRADABILITY: If released to air, a vapor pressure of 435 mm Hg at 25 deg C indicates dichloromethane will exist solely as a vapor in the ambient atmosphere. This material released to the atmosphere will degrade by reaction with hydroxyl radicals with a half-life of several months. It is not subject to direct photooxidation. On land is expected to evaporate rapidly into the atmosphere due to its high vapor pressure. it is poorly adsorbed to soil and can leach into the groundwater. Calculated Adsorption Coefficient (log KOC) is 1. This material is subject to rapid evaporation, with estimated evaporative half-lives ranging from 3 to 5.6 hours under moderate mixing conditions. This material has a negligible rate of hydrolysis. Biodegredation may occur in groundwater, but will be very slow compared with evaporation.
BIOACCUMULATIVE POTENTIAL: Bioconcentration potential in aquatic organisms is low with BCF of 2.
MOBILITY IN SOIL: If released to soil, dichloromethane is expected to have very high mobility based upon an estimated Koc of 24.
OTHER ADVERSE EFFECTS: No data.

Methanol:
TOXICITY: Methanol is of low toxicity to aquatic organisms. LC50 Pimephales promelas (fathead minnows) 29.4 g/L/96 hr, (28-29 days old), confidence limit= 28.5-30.4; Test conditions: Water temp= 25 deg C, dissolved oxygen= 7.3 mg/L, water hardness= 43.5 mg/l calcium carbonate, alkalinity= 46.6 calcium carbonate, tank volume= 6.3 L, additions= 5.71 V/D, pH= 7.66 (0.03).
PERSISTENCE AND DEGRADABILITY: If released to the atmosphere, a vapor pressure of 127 mm Hg at 25 deg C indicates that methanol will exist solely in the vapor phase. Vapor phase methanol is degraded in the atmosphere by reaction with photochemically-produced hydroxyl radicals; the half-life for this reaction in air is estimated to be 17 days. Volatilization from moist soil surfaces is expected to be an important fate process based upon a Henry's Law constant of 4.55X10-6 atm-cu m/mole. Methanol may also volatilize from dry soils based upon it vapor pressure. Biodegradation of methanol in soils is expected to occur rapidly based on half-lives in a sandy silt loam from Texas and a sandy loam from Mississippi of 1 and 3.2 days, respectively. If released into water, methanol is not expected to adsorb to suspended solids and sediment based upon the estimated Koc. Volatilization from water surfaces is expected to be an important fate process based upon this compound's Henry's Law constant. Estimated volatilization half-lives for a model river and model lake are 3 and 35 days, respectively. Biodegradation is expected to occur in natural waters since methanol is degraded quickly in soils and was biodegraded rapidly in various aqueous screening tests using sewage seed or activated sludge. Hydrolysis of methanol and photolysis in sunlit surface waters are not expected since methanol lacks functional groups that are susceptible to hydrolysis or photolysis under environmental conditions.
BIOACCUMULATIVE POTENTIAL: BCF values of less than 10, measured in fish suggests bioconcentration in aquatic organisms is low.
MOBILITY IN SOIL: If released to soil, methanol is expected to have very high mobility based upon an estimated Koc of 1.

Stoddard Solvent:
TOXICITY: This mixture contains components that are potentially toxic to freshwater and saltwater ecosystems. This material may be harmful to aquatic organisms and may cause long term adverse effects in the aquatic

environment.
PERSISTENCE AND DEGRADABILITY: This material will normally float on water. Components will evaporate rapidly.
BIOACCUMULATIVE POTENTIAL: The octanol-water partition coefficient for this material is expected to be in the range of 2.1 to 5.
MOBILITY IN SOIL: No data.
OTHER ADVERSE EFFECTS: No data.

13. Disposal Considerations

Waste Disposal Method

Dispose in accordance with applicable local, state, and federal regulations.

Keep out of bodies of water.

14. Transport Information

LAND TRANSPORT (US DOT)

DOT Proper Shipping Name Paint Related Material
DOT Hazard Class: 8
DOT Hazard Label: CORROSIVE
UN/NA Number: UN3066
Packing Group: II

LAND TRANSPORT (Canadian TDG)

UN Number: 3066
Packing Group: II

Additional Transport Information

For D.O.T. information, contact W.M. Barr Technical Services at 1-800-398-3892.

The supplier may apply one of the following exceptions: Combustible Liquid, Consumer Commodity, Limited Quantity, Viscous Liquid, Does Not Sustain Combustion, or others, as allowed under 49CFR Hazmat Regulations. Please consult 49CFR Subchapter C to ensure that subsequent shipments comply with these exceptions.

Limited quantities of 1 liter or less may be allowed depending on the mode of transportation. Refer to 49 CFR, IMDG Code or IATA Dangerous Goods Regulations for this information.

15. Regulatory Information

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Dichloromethane {Methylene chloride}	75-09-2	No	Yes 1000 LB	Yes	Yes
2. Methanol {Methyl alcohol; Carbinol; Wood alcohol}	67-56-1	No	Yes 5000 LB	Yes	No
3. Stoddard solvent {Mineral spirits; Aliphatic Petroleum Distillates; White spirits}	8052-41-3	No	No	No	

US EPA CAA, CWA, TSCA

Hazardous Components (Chemical Name)	CAS #	EPA CAA	EPA CWA NPDES	EPA TSCA	CA PROP 65
1. Dichloromethane {Methylene chloride}	75-09-2	HAP	Yes	Inventory, 8A CAIR	Yes
2. Methanol {Methyl alcohol; Carbinol; Wood alcohol}	67-56-1	HAP		Inventory	
3. Stoddard solvent {Mineral spirits; Aliphatic Petroleum Distillates; White spirits}	8052-41-3	No		Inventory	

SARA (Superfund Amendments and Reauthorization Act of 1986) Lists:

Sec.302: EPA SARA Title III Section 302 Extremely Hazardous Chemical with TPQ. * indicates 10000 LB TPQ if not volatile.

Sec.304: EPA SARA Title III Section 304: CERCLA Reportable + Sec.302 with Reportable Quantity. ** indicates statutory RQ.

Sec.313: EPA SARA Title III Section 313 Toxic Release Inventory. Note: -Cat indicates a member of a chemical category.

Sec.110: EPA SARA 110 Superfund Site Priority Contaminant List

TSCA (Toxic Substances Control Act) Lists:

Inventory: Chemical Listed in the TSCA Inventory.

5A(2): Chemical Subject to Significant New Rules (SNURS)

6A: Commercial Chemical Control Rules

8A: Toxic Substances Subject To Information Rules on Production

8A CAIR: Comprehensive Assessment Information Rules - (CAIR)

8A PAIR: Preliminary Assessment Information Rules - (PAIR)

8C: Records of Allegations of Significant Adverse Reactions

8D: Health and Safety Data Reporting Rules

8D TERM: Health and Safety Data Reporting Rule Terminations

12(b): Notice of Export

Other Important Lists:

CWA NPDES: EPA Clean Water Act NPDES Permit Chemical

CAA HAP: EPA Clean Air Act Hazardous Air Pollutant

CAA ODC: EPA Clean Air Act Ozone Depleting Chemical (1=CFC, 2=HCFC)

CA PROP 65: California Proposition 65

International Regulatory Lists:

EPA Hazard Categories:

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:

[X] Yes [ ] No Acute (immediate) Health Hazard
[X] Yes [ ] No Chronic (delayed) Health Hazard
[ ] Yes [X] No Fire Hazard
[ ] Yes [X] No Sudden Release of Pressure Hazard
[ ] Yes [X] No Reactive Hazard

Regulatory Information

Methylene Chloride WHMIS Classification: D1B, D2A, D2B
Methylene Chloride WHMIS Health Effects Criteria Met by this Chemical:
D2B - Eye irritation - toxic - other
D2B - Skin irritation - toxic - other
D2A - Carcinogenicity - very toxic - other
D2B - Mutagenicity - toxic - other
D1B - TDG class 6.1 packing group III - toxic - immediate
Methylene Chloride WHMIS Ingredient Disclosure List: Included for disclosure at 0.1% or greater.

Methanol CAS Registry Number: 67-56-1
Methanol WHMIS Classification: B2, D1B, D2A, D2B
Methanol WHMIS Health Effects Criteria Met by this Chemical:
D1B - TDG class 6.1 packing group unknown - toxic - immediate
D2A - Teratogenicity and embryotoxicity - very toxic - other
D2B - Eye irritation - toxic - other
Methanol WHMIS Ingredient Disclosure List: Included for disclosure at 1% or greater. Meets criteria for disclosure at 0.1%.

Stoddard Solvent CAS# 8052-41-3
WHMIS Classification:
B3 - Flammable and combustible material - Combustible liquid
D2B - Poisonous and infectious material - Other effects - Toxic
WHMIS Health Effects Criteria Met by this Chemical: D2B - Skin irritation - toxic - other
WHMIS Ingredient Disclosure List: Included for disclosure at 1% or greater.

This product has been classified according to the hazard criteria of the Controlled Products Regulations.

Concentrations reported in section 2 are weight/weight.

Ingredients disclosed in section 2 are on Canadian DSL.

16. Other Information

Company Policy or Disclaimer

The information contained herein is presented in good faith and believed to be accurate as of the effective date shown above. This information is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. Any use of this data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.

MATERIAL SAFETY DATA SHEET

S04113
12 00

DATE OF PREPARATION
Aug 25, 2012

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
S04113
PRODUCT NAME
KRYLON® PAINT ALL® Enamel, Gloss White
MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
KRYLON PRODUCTS GROUP
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	(800) 251-2486 www.kpg-industrial.com
Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
14	**74-98-6**	**Propane**		
		ACGIH TLV	2500 PPM	760 mm
		OSHA PEL	1000 PPM	
13	**106-97-8**	**Butane**		
		ACGIH TLV	800 PPM	760 mm
		OSHA PEL	800 PPM	
16	**108-88-3**	**Toluene**		
		ACGIH TLV	20 PPM	22 mm
		OSHA PEL	100 ppm (Skin)	
		OSHA PEL	150 ppm (Skin) STEL	
39	**67-64-1**	**Acetone**		
		ACGIH TLV	500 PPM	180 mm
		ACGIH TLV	750 PPM STEL	
		OSHA PEL	1000 PPM	
2	**763-69-9**	**Ethyl 3-Ethoxypropionate**		
		ACGIH TLV	Not Available	1.11 mm
		OSHA PEL	Not Available	
6	**13463-67-7**	**Titanium Dioxide**		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	

SECTION 3 — HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE
INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.

HMIS Codes

Health	2*
Flammability	3
Reactivity	0

EFFECTS OF OVEREXPOSURE
EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.
Prolonged overexposure to hazardous ingredients in Section 2 may cause adverse chronic effects to the following organs or systems:
- the liver

- the urinary system
- the cardiovascular system
- the reproductive system

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.
Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	EXTINGUISHING MEDIA
Propellant < 0 °F	1.0	12.8	Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Containers may explode when exposed to extreme heat.
Application to hot surfaces requires special precautions.
During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.
Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.
Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

Not Available

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep away from heat, sparks, and open flame. Vapors will accumulate readily and may ignite explosively.
During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.
Consult NFPA Code. Use approved Bonding and Grounding procedures.
Contents under pressure. Do not puncture, incinerate, or expose to temperature above 120F. Heat from sunlight, radiators, stoves, hot water, and other heat sources could cause container to burst. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.
Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.
Wash hands after using.
This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.
When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

None required for normal application of aerosol products where minimal skin contact is expected. For long or repeated contact, wear chemical resistant gloves.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PRECAUTIONS

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	6.35 lb/gal	760 g/l
SPECIFIC GRAVITY	0.76	
BOILING POINT	<0 - 342 °F	<-18 - 172 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	92%	
EVAPORATION RATE	Faster than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
pH	7.0	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

Volatile Weight 45.54% Less Water and Federally Exempt Solvents

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

IARC's Monograph No. 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint."

TOXICOLOGY DATA

CAS No.	Ingredient Name			
74-98-6	**Propane**			
		LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
106-97-8	**Butane**			
		LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
108-88-3	**Toluene**			
		LC50 RAT	4HR	4000 ppm
		LD50 RAT		5000 mg/kg
67-64-1	**Acetone**			
		LC50 RAT	4HR	Not Available
		LD50 RAT		5800 mg/kg
763-69-9	**Ethyl 3-Ethoxypropionate**			
		LC50 RAT	4HR	Not Available
		LD50 RAT		5000 mg/kg
13463-67-7	**Titanium Dioxide**			
		LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.
Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.
Do not incinerate. Depressurize container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

US Ground (DOT)

May be classed as LTD. QTY. OR ORM-D
UN1950, AEROSOLS, 2.1, LIMITED QUANTITY, (ERG#126)

Canada (TDG)

May be classed as LTD. QTY. OR ORM-D
UN1950, AEROSOLS, CLASS 2.1, LIMITED QUANTITY, (ERG#126)

IMO

May be shipped as Limited Quantity
UN1950, AEROSOLS, CLASS 2.1, LIMITED QUANTITY, EmS F-D, S-U, ADR (D)

IATA/ICAO

UN1950, AEROSOLS, FLAMMABLE, 2.1, LIMITED QUANTITY

SECTION 15 — REGULATORY INFORMATION

SARA 313 *(40 CFR 372.65C)* SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
108-88-3	Toluene	16	

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

PROGRESS IS OUR COMMITMENT
THE EARTH OUR CONCERN

CRC Industries Europe bvba
Touwslagerstraat 1
9240 Zele - Belgium
Tel (+32) (0) 52 / 45 60 11 - Fax (+32) (0) 52 / 45 00 34

Material Safety Data Sheet

Regulation EC No 1907/2006 Art.31

Productname :	LECTRA CLEAN II	**Creationdate :**	17.11.09
Ref.Nr.:	AB11070-3-171109	**Replaces:**	31.10.07

1. IDENTIFICATION OF PRODUCT AND COMPANY

Productname : LECTRA CLEAN II
Aerosol

Application : Cleaners - Heavy duty

Company :

CRC Industries Europe bvba
Touwslagerstraat 1
9240 ZELE
Belgium
Tel.: (+32)(0)52/456011
Fax: (+32)(0)52/450034
E-mail : hse@crcind.com

In case of emergency : (+32) (0)52/45 60 11

Subsidiaries		Tel	Fax
CRC Industries Finland	Asemanrinne 13, 08500 Lohja AS	(+358)(0)19/32921	(+358)(0)19/383676
CRC Industries France	12, Bld des Martyrs de Chateaubriant F-95102 Argenteuil Cédex	(+33)(0)1/34112000	(+33)(0)1/34110996
CRC Industries Deutschland	Südring 9, 76473 Iffezheim	(+49)(0)7229/3030	(+49)(0)7229/303266
CRC Industries Iberia	Gremio del cuero S/N, 40195 Segovia	(+34)921/427546	(+34)921/436270
CRC Industries Sweden	Kryptongatan 14, 43153 Mölndal	(+46)(0)31/7068480	(+46)(0)31/273991

2. HAZARD IDENTIFICATION

Health and Safety :

Extremely Flammable
Repeated exposure may cause skin dryness or cracking.
Remark: Preparations classified as harmful on the basis of an aspiration hazard need not be labelled as harmful with R65 when placed on the market in aerosol containers or in containers fitted with a sealed spray attachment. (EU-Directive 67/548

Annex VI 9.4)

Environment : According to EU-directive 99/45/EC not classified

Other hazards : Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Do not spray on a naked flame or any incandescent material. Without adequate ventilation formation of explosive mixtures may be possible.

3. COMPOSITION AND INFORMATION ON COMPONENTS

Hazardous ingredient	CAS-nr	EINECS	w/w %	symbol	R-phrases*	Notes
carbon dioxide	124-38-9	204-696-9	1-5	-	-	A,G
(2-methoxymethylethoxy)propanol	34590-94-8	252-104-2	10-30			A
Alkanes (C11-15, iso)	90622-58-5	292-460-6	30-60	Xn	65-66	
Explanation notes						
A : substance with Community workplace exposure limit						
G : excempted from the obligation to register in accordance with art.2(7)(a)of REACH Regulation No 1907/2006						

(* Explanation risk-phrases : see chapter 16)

4. FIRST AID MEASURES

General Advice : The usual precautions for handling chemicals should be observed
If any symptoms should occur, seek medical advice.

Contact with eyes : If substance has got into eyes, immediately wash out with plenty of water

Contact with skin : Wash with water and soap.

Inhalation : Fresh air, keep warm and at rest.

Ingestion : Ingestion is unlikely to occur
If swallowed accidentally, do not induce vomiting and seek medical advice.

5. FIRE-FIGHTING MEASURES

Flash point (without propellant): 63 °C (Closed Cup)

Explosion limits : upper limit : Not available.

lower limit : Not available.

Extinguishing media : foam, carbon dioxide or dry agent

Fire-fighting procedures : Keep container(s) exposed to fire cool, by spraying with water

Unusual exposure hazard : Aerosols may explode if heated above 50°C

6. ACCIDENTAL RELEASE MEASURES

Personal precautions : Shut off all ignition sources
Ensure adequate ventilation

Environmental precautions : Do not allow to enter public sewers and watercourses

Cleaning methods : Absorb spillage in suitable inert material

7. HANDLING AND STORAGE

Handling procedures : Use only in well ventilated areas
Keep away from heat and sources of ignition
Do not spray on a naked flame or incandescent material.
Do not pierce or burn aerosols, even after use.
Do not breathe aerosols or vapours.
Avoid contact with skin and eyes.

Storage procedures : Pressurized container : protect from sunlight and do not expose to temperatures exceeding 50°C.
Keep in a cool, dry, well ventilated place
Keep out of reach of children.

8. EXPOSURE CONTROL AND PERSONAL PROTECTION

Control procedures : Ensure adequate ventilation
Keep away from heat and sources of ignition
Take precautionary measures against static discharges

Personal protection : It is advisable to take precautions to avoid contact with skin and eyes when handling the product.
Use only in well ventilated areas

inhalation : In case of insufficient ventilation, wear suitable respiratory equipment.

hands and skin : Wear suitable protective gloves

eyes : Wear safety goggles.

Exposure limits :

Hazardous ingredient	CAS-nr	method	
EU established exposure limits:			
carbon dioxide	124-38-9	TWA	5000 ppm
(2-methoxymethylethoxy)propanol	34590-94-8	TWA	50 ppm

9. PHYSICAL AND CHEMICAL PROPERTIES (for aerosols without propellant)

Apperance : physical state : CO2 propelled liquid.

colour : Colorless.

odour : Solvent.

Boiling point/range : 180-220 °C

Relative density : 0.825 g/cm3 (@ 20°C).

pH : Not applicable.

Vapour pressure : Not available.

Relative vapour density :	> 5 (@ 20°C).
Solubility in water :	Insoluble in water
Flash point :	63 °C (Closed Cup)
Auto-ignition :	> 200 °C
Viscosity :	1.85 mPa.s (@ 20°C).
Evaporation rate :	150 (Ether=1)

10. STABILITY AND REACTIVITY

Conditions to be avoided :	Pressurized container : protect from sunlight and do not expose to temperatures exceeding 50°C.
Materials to be avoided :	Strong oxidising agent
Hazardous decomposition compounds :	CO,CO2

11. TOXICOLOGICAL INFORMATION

Skin contact :	Prolonged skin contact will result in defatting of the skin

12. ECOLOGICAL INFORMATION

Do not allow to enter public sewers and watercourses

13. WASTE DISPOSAL

Product :	Do not empty into drains. Disposal should be in accordance with local, state or national legislation

14. TRANSPORT

UN-number :	1950
Road/Rail - ADR/RID :	UN1950 Aerosols Class : 2, PG : NA, Class code : 5F, Label : 2.1, Tunnel-code : (B/D)
Sea - IMDG :	UN1950 Aerosols, flammable Class : 2.1, PG : NA, Label : 2.1
EmS	F-D, S-U
Air - IATA/ICAO :	UN1950 Aerosols, flammable Class : 2.1, PG : NA, Label : RFG
Packing instr. LQ	Y203
PAX	203
CAO	203

15. REGULATORY INFORMATION

Warning symbol(s) :	F+ : EXTREMELY FLAMMABLE
Risk-phrase(s) :	R66: Repeated exposure may cause skin dryness or cracking.
Safety-phrase(s) :	S2: Keep out of the reach of children. S16: Keep away from sources of ignition - No

smoking.
S23: Do not breathe vapours/spray.
S51: Use only in well-ventilated areas.

Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Do not spray on a naked flame or any incandescent material. Without adequate ventilation formation of explosive mixtures may be possible.

Classified according to Dir. 2008/47/EC amendment of the aerosol dispenser directive 75/324/EEC.
Classification according to EU-directive 99/45/EC
Remark: Preparations classified as harmful on the basis of an aspiration hazard need not be labelled as harmful with R65 when placed on the market in aerosol containers or in containers fitted with a sealed spray attachment. (EU-Directive 67/548 Annex VI 9.4)

16. OTHER INFORMATION

This product should be stored, handled and used in accordance with good industrial hygiene practices and in conformity with any legal regulation.
The information contained herewith is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It does not guarantee any specific properties.

REVISIONS IN CHAPTRE : 2,6,7,8,15

***Explanation risk-phrases:**
R65: Harmful: may cause lung damage if swallowed.
R66: Repeated exposure may cause skin dryness or cracking.

Praxair Material Safety Data Sheet

1. Chemical Product and Company Identification

Product Name: Nitrogen, refrigerated liquid (MSDS No. P-4630-J)	**Trade Names:** Liquid Nitrogen, Medipure® Liquid Nitrogen
Chemical Name: Nitrogen	**Synonyms:** Nitrogen (cryogenic liquid)
Chemical Family: Cryogenic liquid	**Product Grades:** Industrial, 5.0 Medical Drug

Telephone: **Emergencies:** 1-800-645-4633*
CHEMTREC: 1-800-424-9300*
Routine: 1-800-PRAXAIR

Company Name: Praxair, Inc.
39 Old Ridgebury Road
Danbury, CT 06810-5113

**Call emergency numbers 24 hours a day only for spills, leaks, fire, exposure, or accidents involving this product. For routine information, contact your supplier, Praxair sales representative, or call 1-800-PRAXAIR (1-800-772-9247).*

2. Hazards Identification

EMERGENCY OVERVIEW

WARNING! Extremely cold liquid and gas under pressure.
Can cause rapid suffocation.
Can cause severe frostbite.
May cause dizziness and drowsiness.
Self-contained breathing apparatus and protective clothing may be required by rescue workers.
Under ambient conditions, this is a colorless, odorless, cryogenic liquid.

OSHA REGULATORY STATUS: This material is considered hazardous by the OSHA Hazard Communications Standard (29 CFR 1910.1200).

POTENTIAL HEALTH EFFECTS:

Effects of a Single (Acute) Overexposure

Inhalation. Asphyxiant. Effects are due to lack of oxygen. Moderate concentrations may cause headache, drowsiness, dizziness, excitation, excess salivation, vomiting, and unconsciousness. Lack of oxygen can kill.

Skin Contact. No harm expected from vapor. Cold gas or liquid may cause severe frostbite.

Swallowing. An unlikely route of exposure, but severe frostbite of the lips and mouth may result from contact with the liquid.

Eye Contact. No harm expected from vapor. Cold gas or liquid may cause severe frostbite.

Effects of Repeated (Chronic) Overexposure. No harm expected.

Other Effects of Overexposure. Asphyxiant. Lack of oxygen can kill.

A vertical line in the left margin indicates revised or new material.

Medical Conditions Aggravated by Overexposure. The toxicology and the physical and chemical properties of nitrogen suggest that overexposure is unlikely to aggravate existing medical conditions.

CARCINOGENICITY: Nitrogen is not listed by NTP, OSHA, or IARC.

POTENTIAL ENVIRONMENTAL EFFECTS: None known. For further information, see section 12, Ecological Information.

3. Composition/Information on Ingredients

See section 16 for important information about mixtures.

COMPONENT	CAS NUMBER	CONCENTRATION
Nitrogen	7727-37-9	>99%*

**The symbol > means "greater than."*

4. First Aid Measures

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, qualified personnel may give oxygen. Call a physician.

SKIN CONTACT: For exposure to liquid, immediately warm frostbite area with warm water not to exceed 105°F (41°C). In case of massive exposure, remove clothing while showering with warm water. Call a physician.

SWALLOWING: An unlikely route of exposure. This product is a gas at normal temperature and pressure.

EYE CONTACT: Immediately flush eyes thoroughly with warm water for at least 15 minutes. Hold the eyelids open and away from the eyeballs to ensure that all surfaces are flushed thoroughly. See a physician, preferably an ophthalmologist, immediately.

NOTES TO PHYSICIAN: *There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.*

5. Fire Fighting Measures

FLAMMABLE PROPERTIES: Nitrogen cannot catch fire.

SUITABLE EXTINGUISHING MEDIA: Nitrogen cannot catch fire. Use media appropriate for surrounding fire

PRODUCTS OF COMBUSTION: Not applicable.

PROTECTION OF FIREFIGHTERS: WARNING! Extremely cold liquid and gas under pressure. Asphyxiant. Lack of oxygen can kill. Evacuate all personnel from danger area. Immediately spray containers with water from maximum distance until cool, taking care not to direct spray into vents on top of containers. Do not discharge sprays into liquid nitrogen; it will freeze water rapidly. Shut off flow if you can do so without risk. When containers have cooled, move them away from fire area if without risk. Self-contained breathing apparatus and protective clothing may be required by rescue workers. (See section 16.) On-site fire brigades must comply with OSHA 29 CFR 1910.156.

Specific Physical and Chemical Hazards. Heat of fire can build pressure in cylinder and cause it to rupture. No part of cylinder should be subjected to a temperature higher than 125°F

(52°C). Liquid nitrogen containers are equipped with pressure relief devices. Venting vapors may obscure visibility. Liquid causes severe frostbite, a burn-like injury. (See section 2.)

Protective Equipment and Precautions for Firefighters. Firefighters should wear self-contained breathing apparatus and full fire-fighting turnout gear.

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

WARNING! Extremely cold liquid and gas under pressure.

Personal Precautions. Asphyxiant. Lack of oxygen can kill. Evacuate all personnel from danger area. Use self-contained breathing apparatus and protective clothing where needed. Liquid causes severe frostbite, a burn-like injury. (See section 2.) Shut off flow if you can do so without risk. Avoid contact with spilled liquid and allow it to evaporate. Ventilate area of leak or move container to a well-ventilated area. Test for sufficient oxygen, especially in confined spaces, before allowing reentry.

Environmental Precautions. Prevent waste from contaminating the surrounding environment. Keep personnel away. Discard any product, residue, disposable container, or liner in an environmentally acceptable manner, in full compliance with federal, state, and local regulations. If necessary, call your local supplier for assistance.

7. Handling and Storage

PRECAUTIONS TO BE TAKEN IN HANDLING: Do not get liquid in eyes, on skin, or on clothing. Never allow any unprotected part of your body to touch uninsulated pipes or vessels containing cryogenic fluids. Flesh will stick to the extremely cold metal and will tear when you try to pull free. For liquid withdrawal, wear face shield and cryogenic gloves (see section 8). Use a suitable hand truck to move containers. Always handle and store cryogenic containers in an upright position. Do not drop or tip containers, or roll them on their sides. Open valve slowly. Close container valve after each use; keep closed even when empty. If valve is hard to open, discontinue use and contact your supplier. For other precautions in using nitrogen, see section 16.

PRECAUTIONS TO BE TAKEN IN STORAGE: ***Store and use with adequate ventilation.*** Store only where temperatures will not exceed 125°F (52°C). Do not store in a confined space. Cryogenic containers are equipped with a pressure relief device and a pressure controlling valve. Under normal conditions, these containers will periodically vent product. Use adequate pressure relief devices in systems and piping to prevent pressure buildup; entrapped liquid can generate extremely high pressures when vaporized by warming.

RECOMMENDED PUBLICATIONS: For further information on storage, handling, and use, see Praxair publication P-14-153, *Guidelines for Handling Gas Cylinders and Containers*. Obtain from your local supplier.

8. Exposure Controls/Personal Protection

COMPONENT	OSHA PEL	ACGIH TLV-TWA (2007)
Nitrogen	N.E.*	Simple asphyxiant

*N.E.–Not Established.

IDLH = Not available.

ENGINEERING CONTROLS:

Local Exhaust. Use a local exhaust system, if necessary, to prevent oxygen deficiency.

Mechanical (General). General exhaust ventilation may be acceptable if it can maintain an adequate supply of air.

Special. None

Other. None

PERSONAL PROTECTIVE EQUIPMENT:

Skin Protection. Wear loose-fitting, cryogenic gloves, metatarsal shoes for container handling, and protective clothing where needed. Cuffless trousers should be worn outside the shoes. Select in accordance with OSHA 29 CFR 1910.132 and 1910.133. Regardless of protective equipment, never touch live electrical parts.

Eye/Face Protection. Safety glasses and a full face shield are recommended. Select in accordance with OSHA 29 CFR 1910.133.

Respiratory Protection. Use air-supplied respirators where local or general exhaust ventilation is inadequate. Air-supplied respirators must be used in confined spaces or in an oxygen-deficient atmosphere. Respiratory protection must conform to OSHA rules as specified in 29 CFR 1910.134. Select in accordance with 29 CFR 1910.134 and ANSI Z88.2.

9. Physical and Chemical Properties

APPEARANCE:	Colorless liquid
ODOR:	Odorless
ODOR THRESHOLD:	Not applicable.
PHYSICAL STATE:	Cryogenic liquid
pH:	Not applicable.
MELTING POINT at 1 atm:	-346°F (-210°C)
BOILING POINT at 1 atm:	-320.44°F (-195.80°C)
FLASH POINT (test method):	Not applicable.
EXPANSION RATIO for liquid at boiling point to gas at 70°F (21.1°C):	1 to 696.5
EVAPORATION RATE (Butyl Acetate = 1):	Not available.
FLAMMABILITY:	Nonflammable
FLAMMABLE LIMITS IN AIR, % by volume:	**LOWER:** Not applicable. **UPPER:** Not applicable.
LIQUID DENSITY at boiling point and 1 atm:	50.7 lb/ft^3 (808.5 kg/m^3)
VAPOR PRESSURE at 68°F (20°C):	Not applicable.
VAPOR DENSITY at 70°F (21.1°C) and 1 atm:	0.0724 lb/ft^3 (1.160 kg/m^3)
SPECIFIC GRAVITY (H_2O = 1) at 19.4°F (-7°C):	Not available.
SPECIFIC GRAVITY (Air = 1) at 70°F (21.1°C) and 1 atm:	0.967
SOLUBILITY IN WATER, vol/vol at 32°F (0°C):	0.023
PARTITION COEFFICIENT: n-octanol/water:	Not available.

AUTOIGNITION TEMPERATURE:	Not applicable.
DECOMPOSITION TEMPERATURE:	Not available.
PERCENT VOLATILES BY VOLUME:	100
MOLECULAR WEIGHT:	28.01
MOLECULAR FORMULA:	N_2

10. Stability and Reactivity

CHEMICAL STABILITY: ☐ Unstable ☒ Stable

CONDITIONS TO AVOID: High temperatures, exposure to lithium, neodymium, titanium and magnesium

INCOMPATIBLE MATERIALS: None known.

HAZARDOUS DECOMPOSITION PRODUCTS: None known.

POSSIBILITY OF HAZARDOUS REACTIONS: ☒ May Occur ☐ Will Not Occur

Under certain conditions, nitrogen can react violently with lithium, neodymium, titanium [above 1472°F (800°C)], and magnesium to form nitrides. At high temperature, it can also combine with oxygen and hydrogen.

11. Toxicological Information

ACUTE DOSE EFFECTS: Nitrogen is a simple asphyxiant.

STUDY RESULTS: None known.

12. Ecological Information

ECOTOXICITY: No adverse ecological effects expected.

OTHER ADVERSE EFFECTS: Nitrogen does not contain any Class I or Class II ozone-depleting chemicals.

13. Disposal Considerations

WASTE DISPOSAL METHOD: Do not attempt to dispose of residual or unused quantities. Return cylinder to supplier.

14. Transport Information

DOT/IMO SHIPPING NAME: Nitrogen, refrigerated liquid

HAZARD CLASS:	2.2	**PACKING GROUP/Zone:**	NA*	**IDENTIFICATION NUMBER:**	UN1977	**PRODUCT RQ:**	None

SHIPPING LABEL(s):	NONFLAMMABLE GAS
PLACARD (when required):	NONFLAMMABLE GAS

* Not applicable.

SPECIAL SHIPPING INFORMATION: Cylinders should be transported in a secure position, in a well-ventilated vehicle. Cylinders transported in an enclosed, nonventilated compartment of a vehicle can present serious safety hazards.

Shipment of compressed gas cylinders that have been filled without the owner's consent is a violation of federal law [49 CFR 173.301(b)].

MARINE POLLUTANTS: Nitrogen is not listed as a marine pollutant by DOT.

15. Regulatory Information

The following selected regulatory requirements may apply to this product. Not all such requirements are identified. Users of this product are solely responsible for compliance with all applicable federal, state, and local regulations.

U.S. FEDERAL REGULATIONS:

EPA (ENVIRONMENTAL PROTECTION AGENCY)

CERCLA: COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT OF 1980 (40 CFR Parts 117 and 302):

Reportable Quantity (RQ): None

SARA: SUPERFUND AMENDMENT AND REAUTHORIZATION ACT:

SECTIONS 302/304: Require emergency planning based on Threshold Planning Quantity (TPQ) and release reporting based on Reportable Quantities (RQ) of Extremely Hazardous Substances (EHS) (40 CFR Part 355):

TPQ: None
EHS RQ (40 CFR 355): None

SECTIONS 311/312: Require submission of MSDSs and reporting of chemical inventories with identification of EPA hazard categories. The hazard categories for this product are as follows:

IMMEDIATE: Yes	**PRESSURE:** Yes
DELAYED: No	**REACTIVITY:** No
	FIRE: No

SECTION 313: Requires submission of annual reports of release of toxic chemicals that appear in 40 CFR Part 372.

Nitrogen is not subject to reporting under Section 313.

40 CFR 68: RISK MANAGEMENT PROGRAM FOR CHEMICAL ACCIDENTAL RELEASE PREVENTION: Requires development and implementation of risk management programs at facilities that manufacture, use, store, or otherwise handle regulated substances in quantities that exceed specified thresholds.

Nitrogen is not listed as a regulated substance.

TSCA: TOXIC SUBSTANCES CONTROL ACT: Nitrogen is listed on the TSCA inventory.

OSHA: OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION:

29 CFR 1910.119: PROCESS SAFETY MANAGEMENT OF HIGHLY HAZARDOUS CHEMICALS: Requires facilities to develop a process safety management program based on Threshold Quantities (TQ) of highly hazardous chemicals.

Nitrogen is not listed in Appendix A as a highly hazardous chemical.

STATE REGULATIONS:

CALIFORNIA: Nitrogen is not listed by California under the SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986 (Proposition 65).

PENNSYLVANIA: Nitrogen is subject to the PENNSYLVANIA WORKER AND COMMUNITY RIGHT-TO-KNOW ACT (35 P.S. Sections 7301-7320).

16. Other Information

Be sure to read and understand all labels and instructions supplied with all containers of this product.

OTHER HAZARDOUS CONDITIONS OF HANDLING, STORAGE, AND USE: ***Extremely cold liquid and gas under pressure. Use piping and equipment adequately designed to withstand pressures to be encountered.*** Avoid materials incompatible with cryogenic use; some metals such as carbon steel may fracture easily at low temperature. Use only transfer lines designed for cryogenic liquids. ***Prevent liquid or cold gas from being trapped in piping between valves.*** Equip the piping with pressure relief devices. Use only transfer lines designed for cryogenic liquids. Praxair recommends piping all vents to the exterior of the building. Use a blackflow prevention device in any piping. ***Nitrogen gas can cause rapid suffocation because of oxygen deficiency.*** Store and use with adequate ventilation. ***Never work on a pressurized system.*** If there is a leak, close the cylinder valve. Blow the system down in a safe and environmentally sound manner in compliance with all federal, state, and local laws; then repair the leak. ***Never place a compressed gas cylinder where it may become part of an electrical circuit.***

Mixtures. When you mix two or more gases or liquefied gases, you can create additional, unexpected hazards. Obtain and evaluate the safety information for each component before you produce the mixture. Consult an industrial hygienist or other trained person when you evaluate the end product. Remember, gases and liquids have properties that can cause serious injury or death.

HAZARD RATING SYSTEMS:

NFPA RATINGS:		**HMIS RATINGS:**	
HEALTH	= 3	HEALTH	= 3
FLAMMABILITY	= 0	FLAMMABILITY	= 0
INSTABILITY	= 0	PHYSICAL HAZARD	= 2
SPECIAL	= SA (CGA recommends this to designate Simple Asphyxiant.)		

STANDARD VALVE CONNECTIONS FOR U.S. AND CANADA:

THREADED:	CGA-295
PIN-INDEXED YOKE:	Not applicable.
ULTRA-HIGH-INTEGRITY CONNECTION:	Not applicable.

Use the proper CGA connections. **DO NOT USE ADAPTERS.** Additional limited-standard connections may apply. See CGA pamphlet V-1 listed below.

Ask your supplier about free Praxair safety literature as referred to in this MSDS and on the label for this product. Further information can be found in the following materials published by the Compressed Gas Association, Inc. (CGA), 4221 Walney Road, 5th Floor, Chantilly, VA 20151-2923, Telephone (703) 788-2700, http://www.cganet.com/Publication.asp.

AV-1	*Safe Handling and Storage of Compressed Gases*
AV-5	*Safe Handling of Liquefied Nitrogen and Neon*
P-1	*Safe Handling of Compressed Gases in Containers*
P-9	*Inert Gases – Argon, Nitrogen, and Helium*

P-12	*Safe Handling of Cryogenic Liquids*
SB-2	*Oxygen-Deficient Atmospheres*
V-1	*Compressed Gas Cylinder Valve Inlet and Outlet Connections*
—	*Handbook of Compressed Gases, Fourth Edition*

Praxair asks users of this product to study this MSDS and become aware of product hazards and safety information. To promote safe use of this product, a user should (1) notify employees, agents, and contractors of the information in this MSDS and of any other known product hazards and safety information, (2) furnish this information to each purchaser of the product, and (3) ask each purchaser to notify its employees and customers of the product hazards and safety information.

The opinions expressed herein are those of qualified experts within Praxair, Inc. We believe that the information contained herein is current as of the date of this Material Safety Data Sheet. Since the use of this information and the conditions of use of the product are not within the control of Praxair, Inc., it is the user's obligation to determine the conditions of safe use of the product.

Praxair MSDSs are furnished on sale or delivery by Praxair or the independent distributors and suppliers who package and sell our products. To obtain current MSDSs for these products, contact your Praxair sales representative or local distributor or supplier, or download from www.praxair.com. If you have questions regarding Praxair MSDSs, would like the form number and date of the latest MSDS, or would like the names of the Praxair suppliers in your area, phone or write the Praxair Call Center (**Phone:** 1-800-PRAXAIR; **Address:** Praxair Call Center, Praxair, Inc., PO Box 44, Tonawanda, NY 14151-0044).

PRAXAIR®

Praxair, Inc.
39 Old Ridgebury Road
Danbury, CT 06810-5113

Printed in USA

Praxair Material Safety Data Sheet

1. Chemical Product and Company Identification

Product Name: Oxygen, refrigerated liquid (P-4637-H)	**Trade Names:** Liquid Oxygen, Medipure® Liquid Oxygen
Chemical Name: Chemical Name	**Synonyms:** Oxygen (cryogenic liquid)
Chemical Family: Cryogenic liquid	**Product Grades:** Industrial, aviator's breathing, USP

Telephone: **Emergencies:** 1-800-645-4633* **CHEMTREC:** 1-800-424-9300* **Routine:** 1-800-PRAXAIR

Company Name: Praxair, Inc.
39 Old Ridgebury Road
Danbury, CT 06810-5113

**Call emergency numbers 24 hours a day only for spills, leaks, fire, exposure, or accidents involving this product. For routine information, contact your supplier, Praxair sales representative, or call 1-800-PRAXAIR (1-800-772-9247).*

2. Hazards Identification

EMERGENCY OVERVIEW

WARNING! Extremely cold, oxidizing liquid and gas under pressure.
Vigorously accelerates combustion.
Combustibles in contact with liquid oxygen may explode on ignition or impact.
Can cause severe frostbite.
May cause dizziness and drowsiness.
Self-contained breathing apparatus and protective clothing may be required by rescue workers.
This material is a pale blue, odorless cryogenic liquid.

OSHA REGULATORY STATUS: This material is considered hazardous by the OSHA Hazard Communications Standard (29 CFR 1910.1200).

POTENTIAL HEALTH EFFECTS:

Effects of a Single (Acute) Overexposure

Inhalation. Breathing 80% or more oxygen at atmospheric pressure for more than a few hours may cause nasal stuffiness, cough, sore throat, chest pain, and breathing difficulty. At higher pressures, adverse effects from breathing pure oxygen are more likely and may occur sooner. Breathing pure oxygen under pressure may damage the lungs and affect the Central Nervous System (CNS), producing dizziness, poor coordination, a tingling sensation, visual and hearing disturbances, muscular twitching, unconsciousness, and convulsions. Persons who breathe oxygen under pressure may adapt more slowly to darkness and may suffer reduced peripheral vision.

Skin Contact. No harm expected from vapor. Cold gas or liquid may cause severe frostbite.

A vertical line in the left margin indicates revised or new material.

Swallowing. An unlikely route of exposure, but severe frostbite of the lips and mouth may result from contact with the liquid.

Eye Contact. No harm expected from vapor. Cold gas or liquid may cause severe frostbite.

Effects of Repeated (Chronic) Overexposure. No harm expected.

Other Effects of Overexposure. See section 11, Toxicological Information.

Medical Conditions Aggravated by Overexposure. See section 11, Toxicological Information.

CARCINOGENICITY: Oxygen is not listed by NTP, OSHA, or IARC.

POTENTIAL ENVIRONMENTAL EFFECTS: None known. For further information, see section 12, Ecological Information.

3. Composition/Information on Ingredients

See section 16 for important information about mixtures.

COMPONENT	CAS NUMBER	CONCENTRATION
Oxygen	7782-44-7	>99%*

**The symbol > means "greater than."*

4. First Aid Measures

INHALATION: Immediately remove to fresh air. If not breathing, give artificial respiration. Keep victim warm and at rest. Call a physician. Advise the physician that the victim has been exposed to a high concentration of oxygen.

SKIN CONTACT: For exposure to liquid, immediately warm frostbite area with warm water not to exceed 105°F (41°C). In case of massive exposure, remove clothing while showering with warm water. Call a physician. In case of frostbite, obtain immediate medical attention.

SWALLOWING: An unlikely route of exposure. This product is a gas at normal temperature and pressure.

EYE CONTACT: Immediately flush eyes thoroughly with warm water for at least 15 minutes. Hold the eyelids open and away from the eyeballs to ensure that all surfaces are flushed thoroughly. See a physician, preferably an ophthalmologist, immediately.

NOTES TO PHYSICIAN: *Supportive treatment should include immediate sedation, anti-convulsive therapy if needed, and rest. See section 11, Toxicological Information.*

5. Fire Fighting Measures

FLAMMABLE PROPERTIES: Oxidizing agent; vigorously accelerates combustion. Contact with flammable materials may cause fire or explosion. Do not walk on or roll equipment over spill; any impact could cause an explosion. Smoking, flames, and electric sparks are potential explosion hazards in oxygen-enriched atmospheres. Heat of fire can build pressure in a closed container and cause it to rupture. No part of a container should be subjected to a temperature higher than 125°F (52°C). Liquid oxygen containers are equipped with pressure relief devices. Venting vapors may obscure visibility. Liquid causes severe frostbite, a burn-like injury. Air will condense on surfaces such as vaporizers and piping exposed to liquid or cold gas. Nitrogen, which has a lower boiling point than oxygen, will evaporate first, leaving an oxygen-

enriched condensate. Keep all areas of possible condensation free of oil, grease, and other combustible materials to prevent possible ignition or explosion.

SUITABLE EXTINGUISHING MEDIA: Vigorously accelerates combustion. Use media appropriate for surrounding fire. Water (e.g., safety shower) is the preferred extinguishing media for clothing fires.

PRODUCTS OF COMBUSTION: Not applicable.

PROTECTION OF FIREFIGHTERS: WARNING! Extremely cold, oxidizing liquid and gas under pressure. Evacuate all personnel from danger area. Immediately spray containers with water from maximum distance until cool, taking care not to direct spray onto vents on top of container. Do not discharge sprays into liquid oxygen. Liquid oxygen will freeze water rapidly. When containers have cooled, move them away from fire area if without risk. Self-contained breathing apparatus may be required by rescue workers. On-site fire brigades must comply with OSHA 29 CFR 1910.156.

Specific Physical and Chemical Hazards. Air will condense on surfaces such as vaporizers and piping exposed to liquid or cold gas. Nitrogen, which has a lower boiling point than oxygen, will evaporate first, leaving an oxygen-enriched condensate. Keep all areas of possible condensation free of oil, grease, and other combustible materials to prevent possible ignition or explosion.

Protective Equipment and Precautions for Firefighters. Firefighters should wear self-contained breathing apparatus and full fire-fighting turnout gear.

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

WARNING! Extremely cold, oxidizing liquid and gas under pressure.

Personal Precautions. Immediately evacuate all personnel from danger area. Avoid contact with spilled liquid and allow it to evaporate. Extremely cold oxidizing liquid and gas. Liquid causes severe frostbite, a burn-like injury. Do not walk on or roll equipment over spill; any impact could cause an explosion. Contact with flammable materials may cause fire or explosion. Smoking, flames, and electric sparks are potential explosion hazards in enriched oxygen atmospheres. Shut off leak if without risk. Ventilate area or move leaking container to ventilated area. Remove all flammable materials from vicinity. Oxygen must never be permitted to strike an oily surface, greasy clothes, or other combustible material.

Environmental Precautions. Prevent waste from contaminating the surrounding environment. Keep personnel away. Discard any product, residue, disposable container, or liner in an environmentally acceptable manner, in full compliance with federal, state, and local regulations. If necessary, call your local supplier for assistance.

7. Handling and Storage

PRECAUTIONS TO BE TAKEN IN HANDLING: ***Never allow any unprotected part of your body to touch uninsulated pipes or vessels containing cryogenic fluids.*** Flesh will stick to the extremely cold metal and will tear when you try to pull free. ***Never use oxygen as a substitute for compressed air.*** Never use an oxygen jet for cleaning of any sort, especially for cleaning clothing. Oxygen-saturated clothing may burst into flame at the slightest spark and be quickly consumed in an engulfing fire. ***Do not get liquid in eyes, on skin, or on clothing.*** Persons exposed to high concentrations of liquid oxygen should stay in a well-ventilated or open

area for 30 minutes before entering a confined space or going near any source of ignition. Immediately remove clothing exposed to oxygen and air it out to reduce the likelihood of an engulfing fire. Prevent ignition sources such as static electricity generated in clothing while walking. ***Protect container against physical damage.*** Isolate it from combustible gas installations and combustible materials by an adequate distance or by gas-tight, fire resistant barriers. *Use a suitable hand truck to move containers.* Cryogenic containers must be handled and stored in an upright position. Do not drop or tip containers, or roll them on their sides. ***Close valve after each use; keep closed even when empty.*** If valve is hard to open, discontinue use and contact your supplier. For other precautions in using oxygen, see section 16.

PRECAUTIONS TO BE TAKEN IN STORAGE: ***Store and use with adequate ventilation, away from oil, grease, and other hydrocarbons.*** Protect against overheating. Store only where temperature will not exceed 125°F (52°C). ***Do not store in a confined space.*** Cryogenic containers are equipped with a pressure relief device and a pressure controlling valve. Under normal conditions, these containers will periodically vent product. ***Separate oxygen containers from flammables*** by at least 20 ft (6.1 m) or use a barricade of noncombustible material. This barricade should be at least 5 ft (1.53 m) and have a fire resistance rating of at least ½ hour. ***Use adequate pressure relief devices in systems and piping to prevent pressure buildup;*** entrapped liquid can generate extremely high pressures when vaporized by warming.

RECOMMENDED PUBLICATIONS: For further information on storage, handling, and use, see Praxair publication P-14-153, *Guidelines for Handling Gas Cylinders and Containers*. Obtain from your local supplier.

8. Exposure Controls/Personal Protection

COMPONENT	OSHA PEL	ACGIH TLV-TWA (2007)
Oxygen	Not established.	Not established.

IDLH = Not available.

ENGINEERING CONTROLS:

Local Exhaust. Use a local exhaust system, if necessary, to prevent increased oxygen concentration.

Mechanical (General). Adequate

Special. None

Other. None

PERSONAL PROTECTIVE EQUIPMENT:

Skin Protection. Wear loose-fitting, cryogenic gloves, metatarsal shoes for container handling, and protective clothing where needed. Cuffless trousers should be worn outside the shoes. Gloves must be free of oil and grease. Select in accordance with OSHA 29 CFR 1910.132 and 1910.133. Regardless of protective equipment, never touch live electrical parts.

Eye/Face Protection. Safety glasses and a full face shield are recommended. Select in accordance with OSHA 29 CFR 1910.133.

Respiratory Protection. None required under normal use. However, an air-supplied respirator must be used while working in confined spaces with this product. The respiratory protection

used must conform with OSHA rules as specified in 29 CFR 1910.134. Select per OSHA 29 CFR 1910.134 and ANSI Z88.2.

9. Physical and Chemical Properties

APPEARANCE:	Pale blue cryogenic liquid
ODOR:	Odorless
ODOR THRESHOLD:	Not applicable.
PHYSICAL STATE:	Cryogenic liquid
pH:	Not applicable.
FREEZING POINT at 1 atm:	-361.1°F (-218.4°C)
BOILING POINT at 1 atm:	-297.4°F (-183°C)
FLASH POINT (test method):	Not applicable.
EVAPORATION RATE (Butyl Acetate = 1):	High
FLAMMABILITY:	Nonflammable
FLAMMABLE LIMITS IN AIR, % by volume:	**LOWER:** Not applicable. **UPPER:** Not applicable.
EXPANSION RATIO:	1 to 860.5
VAPOR PRESSURE:	Not available.
VAPOR DENSITY at 70°F (21.1°C) and 1 atm:	0.0827 lb/ft^3 (1.325 kg/m^3)
SPECIFIC GRAVITY (H_2O = 1) at boiling point:	1.141
SPECIFIC GRAVITY (Air = 1) at 70°F (21.1°C) and 1 atm:	1.105
SOLUBILITY IN WATER vol/vol at 32°F (0°C):	0.0489 (gas)
PARTITION COEFFICIENT: n-octanol/water:	Not available.
AUTOIGNITION TEMPERATURE:	Not applicable.
DECOMPOSITION TEMPERATURE:	None
PERCENT VOLATILES BY VOLUME:	100
MOLECULAR WEIGHT:	31.9988
MOLECULAR FORMULA:	O_2

10. Stability and Reactivity

CHEMICAL STABILITY: ☐ Unstable ☒ Stable

CONDITIONS TO AVOID: Contact with incompatible materials.

INCOMPATIBLE MATERIALS: Flammable materials, hydrocarbons such as oils and grease, asphalt, ethers, alcohols, acids, and aldehydes. Oxygen reacts with many materials.

HAZARDOUS DECOMPOSITION PRODUCTS: Per input or existing MSDS.

POSSIBILITY OF HAZARDOUS REACTIONS: ☒ May Occur ☐ Will Not Occur

Contact with incompatible materials may result in explosion or fire.

11. Toxicological Information

ACUTE DOSE EFFECTS: Not available.

STUDY RESULTS: At atmospheric concentration and pressure, oxygen poses no toxicity hazards. At high concentrations, newborn premature infants may suffer delayed retinal damage (retrolental fibroplasia) that can progress to retinal detachment and blindness. Retinal damage may also occur in adults exposed to 100% oxygen for extended periods (24 to 48 hours) or at pressures exceeding atmospheric pressure, particularly in individuals whose retinal circulation has been previously compromised. All individuals exposed for long periods to oxygen at high pressure and all who exhibit overt oxygen toxicity should have ophthalmologic examinations.

At two or more atmospheres, toxicity to the CNS occurs. Symptoms include nausea, vomiting, dizziness or vertigo, muscle twitching, vision changes, and loss of consciousness and generalized seizures. At three atmospheres, CNS toxicity occurs in less than two hours; at six atmospheres, in only a few minutes.

Patients with chronic obstructive pulmonary disease retain carbon dioxide abnormally. If oxygen is administered, raising their blood-oxygen concentration, their breathing becomes depressed, and retained carbon dioxide rises to a dangerous level.

Animal studies suggest that the administration of certain drugs, including phenothiazine drugs and chloroquine, increases the susceptibility to toxicity from oxygen at high concentrations or pressures. Animal studies also indicate that vitamin E deficiency may increase susceptibility to oxygen toxicity.

Airway obstruction during high oxygen tension may cause alveolar collapse following absorption of the oxygen. Similarly, occlusion of the eustachian tubes may cause retraction of the eardrum and obstruction of the paranasal sinuses may produce vacuum-type headache.

12. Ecological Information

ECOTOXICITY: The atmosphere contains approximately 21% oxygen. No adverse ecological effects expected.

OTHER ADVERSE EFFECTS: Oxygen does not contain any Class I or Class II ozone-depleting chemicals.

13. Disposal Considerations

WASTE DISPOSAL METHOD: Do not attempt to dispose of residual or unused quantities. Contact your supplier.

Emergency Disposal.

CAUTION: Any disposal must be conducted in accordance with federal, state, and local regulations.

Discharge slowly to the atmosphere in a well-ventilated area or outdoors. Also see section 6 for disposal following spills.

14. Transport Information

DOT/IMO SHIPPING NAME: Oxygen, refrigerated liquid

HAZARD CLASS:	2.2	**PACKING GROUP/Zone:**	NA/NA*	**IDENTIFICATION NUMBER:**	UN1073
PRODUCT RQ:	None				

SHIPPING LABEL(s): NONFLAMMABLE GAS, OXIDIZER

PLACARD (when required): NONFLAMMABLE GAS, OXIDIZER

**NA = Not applicable.*

SPECIAL SHIPPING INFORMATION: Cylinders should be transported in a secure position, in a well-ventilated vehicle. Cylinders transported in an enclosed, nonventilated compartment of a vehicle can present serious safety hazards.

Shipment of compressed gas cylinders that have been filled without the owner's consent is a violation of federal law [49 CFR 173.301(b)].

MARINE POLLUTANTS: Oxygen is not listed as a marine pollutant by DOT.

15. Regulatory Information

The following selected regulatory requirements may apply to this product. Not all such requirements are identified. Users of this product are solely responsible for compliance with all applicable federal, state, and local regulations.

U.S. FEDERAL REGULATIONS:

EPA (ENVIRONMENTAL PROTECTION AGENCY)

CERCLA: COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT OF 1980 (40 CFR Parts 117 and 302):

Reportable Quantity (RQ): None

SARA: SUPERFUND AMENDMENT AND REAUTHORIZATION ACT:

SECTIONS 302/304: Require emergency planning based on Threshold Planning Quantity (TPQ) and release reporting based on Reportable Quantities (RQ) of Extremely Hazardous Substances (EHS) (40 CFR Part 355):

TPQ: None
EHS RQ (40 CFR 355): None

SECTIONS 311/312: Require submission of MSDSs and reporting of chemical inventories with identification of EPA hazard categories. The hazard categories for this product are as follows:

IMMEDIATE: Yes
DELAYED: No
PRESSURE: Yes
REACTIVITY: No
FIRE: Yes

SECTION 313: Requires submission of annual reports of release of toxic chemicals that appear in 40 CFR Part 372.

Oxygen is not subject to reporting under Section 313.

40 CFR 68: RISK MANAGEMENT PROGRAM FOR CHEMICAL ACCIDENTAL RELEASE PREVENTION: Requires development and implementation of risk management programs at facilities that manufacture, use, store, or otherwise handle regulated substances in quantities that exceed specified thresholds.

Oxygen is not listed as a regulated substance.

TSCA: TOXIC SUBSTANCES CONTROL ACT: Oxygen is listed on the TSCA inventory.

OSHA: OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION:

29 CFR 1910.119: PROCESS SAFETY MANAGEMENT OF HIGHLY HAZARDOUS CHEMICALS: Requires facilities to develop a process safety management program based on Threshold Quantities (TQ) of highly hazardous chemicals.

Oxygen is not listed in Appendix A as a highly hazardous chemical.

STATE REGULATIONS:

CALIFORNIA: Oxygen is not listed by California under the SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986 (Proposition 65).

PENNSYLVANIA: Oxygen is subject to the PENNSYLVANIA WORKER AND COMMUNITY RIGHT-TO-KNOW ACT (35 P.S. Sections 7301-7320).

16. Other Information

Be sure to read and understand all labels and instructions supplied with all containers of this product.

WARNING: Medical grades of oxygen are subject to strict federal regulation and are for use only under the control of a licensed physician or clinician familiar with the product and its hazards.

OTHER HAZARDOUS CONDITIONS OF HANDLING, STORAGE, AND USE: ***Extremely cold, oxidizing liquid and gas under pressure.*** All gauges, valves, regulators, piping, and equipment to be used in oxygen service must be cleaned for oxygen service in accordance with CGA pamphlet G-4.1. Keep containers and their valves free of oil and grease. ***Use piping and equipment adequately designed to withstand the pressures to be encountered.*** Use a backflow prevention device in any piping. Avoid materials incompatible with cryogenic use; some metals such as carbon steel may fracture easily at low temperature. To prevent cryogenic liquid or cold gas from being trapped in piping between valves, equip the piping with pressure relief devices; entrapped liquid can generate extremely high pressures when vaporized by warming. Use only transfer lines designed for cryogenic liquids. Praxair recommends piping all vents to the exterior of the building. ***Never work on a pressurized system.*** If a leak occurs, close the cylinder valve. Blow the system down in a safe and environmentally sound manner in compliance with all federal, state, and local laws; then repair the leak. ***Never place a compressed gas cylinder where it may become part of an electrical circuit.***

Use of this product in manufacturing may generate toxic fumes and gases or create additional toxicity hazards. Consult an industrial hygienist or other appropriately trained person to evaluate end-use operations or processes for hazards and to establish measures to protect employees.

Mixtures. When you mix two or more gases or liquefied gases, you can create additional, unexpected hazards. Obtain and evaluate the safety information for each component before you produce the mixture. Consult an industrial hygienist or other trained person when you evaluate the end product. Remember, gases and liquids have properties that can cause serious injury or death.

HAZARD RATING SYSTEMS:

NFPA RATINGS:		**HMIS RATINGS:**	
HEALTH	= 3	HEALTH	= 3
FLAMMABILITY	= 0	FLAMMABILITY	= 0
INSTABILITY	= 0	PHYSICAL HAZARD	= 2
SPECIAL	= OX		

STANDARD VALVE CONNECTIONS FOR U.S. AND CANADA:

THREADED:	CGA-440 (cryogenic liquid withdrawal)
PIN-INDEXED YOKE:	Not applicable.
ULTRA-HIGH-INTEGRITY CONNECTION:	Not applicable.

Use the proper CGA connections. **DO NOT USE ADAPTERS.** Additional limited-standard connections may apply. See CGA pamphlet V-1 listed below.

Ask your supplier about free Praxair safety literature as referred to in this MSDS and on the label for this product. Further information can be found in the following materials published by the Compressed Gas Association, Inc. (CGA), 4221 Walney Road, 5th Floor, Chantilly, VA 20151-2923, Telephone (703) 788-2700, http://www.cganet.com/Publication.asp.

AV-1	*Safe Handling and Storage of Compressed Gases*
AV-8	*Characteristics and Safe Handling of Cryogenic Liquid and Gaseous Oxygen*
G-4	*Oxygen*
G-4.1	*Cleaning Equipment for Oxygen Service*
P-1	*Safe Handling of Compressed Gases in Containers*
P-2	*Characteristics and Safe Handling of Medical Gases*
P-12	*Safe Handling of Cryogenic Liquids*
P-39	*Oxygen-Rich Atmospheres*
V-1	*Compressed Gas Cylinder Valve Inlet and Outlet Connections*
V-7.1	*Standard Method Of Determining Cylinder Valve Outlet Connections For Medical Gases*
—	*Handbook of Compressed Gases, Fourth Edition*

Praxair asks users of this product to study this MSDS and become aware of product hazards and safety information. To promote safe use of this product, a user should (1) notify employees, agents, and contractors of the information in this MSDS and of any other known product hazards and safety information, (2) furnish this information to each purchaser of the product, and (3) ask each purchaser to notify its employees and customers of the product hazards and safety information.

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Praxair MSDSs are furnished on sale or delivery by Praxair or the independent distributors and suppliers who package and sell our products. To obtain current MSDSs for these products, contact your Praxair sales representative or local distributor or supplier, or download from www.praxair.com. If you have questions regarding Praxair MSDSs, would like the form number and date of the latest MSDS, or would like the names of the Praxair suppliers in your area, phone or write the Praxair Call Center (**Phone:** 1-800-PRAXAIR; **Address:** Praxair Call Center, Praxair, Inc., PO Box 44, Tonawanda, NY 14151-0044).

PRAXAIR®

Praxair, Inc.
39 Old Ridgebury Road
Danbury, CT 06810-5113

Printed in USA

MSDS - Material Safety Data Sheet
Product Name: LIQUID WRENCH WHITE LITHIUM GREASE WITH CERFLON

MSDS No.: L606

I. Basic Information:

Manufacturer: RADIATOR SPECIALTY COMPANY
Address: 600 RADIATOR ROAD
City, ST Zip: INDIAN TRAIL, NC 28079
Country:

Contact: Robert Geer
Information Telephone Number: 704-684--181 1
Emergency Contact: Rocky Mountain Poision Control Center
Emergency Telephone Number: 303-623-5716
Emergency Restrictions:

Product Name: LIQUID WRENCH WHITE LITHIUM GREASE WITH CERFLON
MSDS No.: L606

Issue Date: 11/04/2009
Supersedes Date: Not Available

II. Hazards Identification:

EMERGENCY OVERVIEW

Danger: Harmful or fatal if swallowed. Vapor harmful. Eye and skin irritant. Contents under pressure.

Level 1 Aerosol

OSHA Regulatory Status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Potential Health Effects

Route(s) of Entry:

Absorption, Inhalation, and Ingestion.

Health Hazards (Acute and Chronic):

Excessive ingestion may cause stomach irritation, nausea, vomiting. Can cause liver damage and affect the kidneys adversely.

Signs and Symptoms:

Eye Contact: Irritant. Prolonged contact may cause conjunctivitis.
Skin Contact: Irritant. Defatting of tissue, dermatitis may occur.
Inhalation: Irritant to mucous membranes. Repeated exposure may cause narcosis..
Ingestion: HARMFUL OR FATAL IF SWALLOWED. May cause burns to mouth, throat & stomach.

Medical Conditions Generally Aggravated by Exposure:

Prolonged exposure above the OSHA permissible exposure limit may complicate existing liver and kidney diseases.

Other Health Warnings:

Aspiration of vomitus into the lungs can cause pneumonitis, which can be fatal. Do not administer adrenaline or other sympathommietic drugs to persons overexposed to Perchloroethylene.

Potential Environmental Effects

Not Available

III. Composition/Information on Ingredients:

Chemical Name	CAS No.	% Range	Trade Secret
1,2,4-Trimethylbenzene	95-63-6	0.1 - 1.0	
Aliphatic Hydrocarbon Solvent	8052-41-3	7.0 - 13.0	
Carbon dioxide	124-38-9	1.0 - 5.0	
Lithium Grease	Proprietary	10.0 - 30.0	
Low Odor Base Solvent	Proprietary	1.0 - 5.0	
Mesitylene	108-67-8	0.1 - 1.0	
Naphthenic Petroleum Distillate	64742-52-5	10.0 - 30.0	
Tetrachloroethylene	127-18-4	40.0 - 70.0	
Xylene (mixed isomers)	1330-20-7	0.1 - 1.0	

MSDS - Material Safety Data Sheet
Product Name: LIQUID WRENCH WHITE LITHIUM GREASE WITH CERFLON
MSDS No.: L606

IV. First Aid Measures:

Emergency and First Aid Procedures:

Eye Contact: Flush eyes with clean water for 15 minutes while lifting eyelids. Get prompt medical attention.
Skin Contact: Wash with soap and water thoroughly. If adverse effects persist, get prompt medical attention. Launder contaminated clothing before reuse.
Inhalation: Remove to fresh air. If breathing becomes difficult get prompt medical attention.
Ingestion: DO NOT INDUCE VOMITING! Call Poison Control Center, physician, or hospital emergency room immediately.

Note to Physicians:

N/E

V. Fire Fighting Measures:

Suitable Extinguishing Media:

Water Fog, Foam, Carbon Dioxide, Dry Chemical

Unsuitable Extinguishing Media:

Do not use forced water stream as this could cause the fire to spread.

Products of Combustion:

May liberate corrosive hydrochloric acid or toxic phosgene fumes.

Protection of Firefighters:

Wear self-contained positive pressure breathing apparatus and protective clothes. Use shield to protect from rupturing and venting containers. At elevated temperatures containers may vent, rupture or burst, even violently

VI. Accidental Release Measures:

Personal Precautions:

Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental Precautions:

Prevent run-off to sewers, streams, or other bodies of water. If run-off occurs, notify proper authorities as required that a spill has occurred. Run off to sewer may create fire or explosion hazard.

Methods for Containment:

Dike or contain spill and absorb with inert materials (sand, sawdust, absorbent sweeping compounds, rags, etc).

Methods for Cleanup:

Using a non-metalic scoop, place contaminated material into an approved chemical waste container. Where possible, vacuum spilled liquid using an explosion proof vacuum to recover material.

Other Information:

Prevent run-off to sewers, streams, or other bodies of water. If run-off occurs, notify proper authorities as required that a spill has occurred.

VII. Handling and Storage:

Handling Precautions:

Use with adequate ventilation and proper protective equipment.
Do not use or store near fire, sparks, or open flame. Do not puncture or incinerate container. Exposure to temperatures above 120° may cause container to vent, rupture, or burst.

Storage Precautions:

Vapors are heavier that air and will collect in low areas. This material or its vapors when in contact with flames, hot glowing surfaces or electric arcs can decompose to form hydrogen chloride gas and possible traces of phosgene. Avoid contamination with water supplies.

VIII. Exposure Controls/Personal Protection:

MSDS - Material Safety Data Sheet
Product Name: LIQUID WRENCH WHITE LITHIUM GREASE WITH CERFLON

MSDS No.: L606

Chemical Name	OSHA PEL	ACGIH TLV	Other Limits
Tetrachloroethylene	25 ppm	25 ppm	Not Available
Lithium Grease	N/E	N/E	Not Available
Carbon dioxide	N/AV	5000 ppm	Not Available
Aliphatic Hydrocarbon Solvent	100 ppm	100 ppm	Not Available
1,2,4-Trimethylbenzene	N/E	25 ppm	Not Available
Mesitylene	N/A	N/A	Not Available
Xylene (mixed isomers)	100 ppm	100 ppm	Not Available
Low Odor Base Solvent	N/E	N/E	Not Available
Naphthenic Petroleum Distillate	5 mg/m3	5 mg/m3	Not Available

Engineering Controls:

See above for applicable exposure limits. Maintain adequate ventilation.
Avoid breathing vapors. In restricted areas, use approved chemical filters designed to remove vapor. In confined areas, use approved air line type respirator or hood. A self-contained breathing apparatus is required for vapor concentrations above TLV limits.

Personal Protective Equipment:

For prolonged exposure wear protective safety glasses, gloves, and apron.

IX. Physical and Chemical Properties:

Boiling Point: >200°F
Boiling Range: Not Available
Solubility In Water: Insoluble
Flash Point: > 200°F
Odor Threshold: Not Available
Vapor Density (AIR = 1): 5.83
pH Range: N/A
Decomposition Temp: Not Available
Lower Explosive Limit: Not Available
Specific Gravity (H20 = 1): 1.20
Other Information: VOC Content: 12%

Melting Point: N/A
Freezing Point: Not Available
Evaporation Rate (Butyl Acetate = 1): >1.0
Flash Point Method: TCC
Appearance and Odor: Opaque dense off white suspension with sweet odor
Vapor Pressure (mm Hg.): Not Det.
Partition Coefficient: Not Available
Auto-Ignition Temp: Not Available
Upper Explosive Limit: Not Available

X. Stability and Reactivity:

Stability:

Stable

Conditions to Avoid:

N/D

Incompatible Materials:

Avoid contact with metals such as aluminum powders, magnesium powders, potassium, sodium, and zinc powder. Avoid contact with amines, strong bases, and oxidizers.

Hazardous Decomposition Products:

Under fire conditions may include carbon dioxide, carbon monoxide, phosgene and chlorine. Flames, welding, and high temperatures induce decomposition. In the presence of water: hydrochloric acid.

Possibility of Hazardous Reactions:

Will not occur

MSDS - Material Safety Data Sheet
Product Name: LIQUID WRENCH WHITE LITHIUM GREASE WITH CERFLON
MSDS No.: L606

XI. Toxicological Information:

ACUTE INHALATION LC50: (rats) 5040 ppm for 8 hours. Moderately toxic.
ACUTE DERMAL LD50: (rabbit) > 3228 mg/kg. Slight to very low toxicity
SKIN IRRITATION: Mildly irritating.
EYE IRRITATION: Mildly irritating.
ACUTE ORAL LD50: (rats) 2629 mg/kg. Moderalely toxic.

This product is listed under IARC as a 2A

XII. Ecological Information:

Toxic to aquatic life.
100 - 10 ppm (fish) 96-hours TLM LC50

XIII. Disposal Considerations:

DISPOSAL: This container may be recycled in aerosol recycling centers when empty. Before offering for recycling, empty the can by using the product according to the label. DO NOT PUNCTURE! If recycling is not available, wrap the container and discard in the trash. Dispose of unused product in accordance with all local, state government and federal laws and regulations.

XIV. Transport Information:

Shipping Name: Not Available

DOT Hazard Class: Not Available

DOT Subsidiary Hazard Class: Not Available

UN/NA#: Not Available

Packing Group: Not Available

Transportation Information:

DOT Hazard Class: ORM-D
Shipping Name: Consumer Commodity

The DOT description is provided to assist in the proper shipping classification of this product and may not be suitable for international and air shipping purposes.

ICAO/IATA (US)
Shipping Name: Aerosols
Class: 2.1 (6.1)
UN number: UN1950

International:

ICAO/IATA
UN number: UN1950
Shipping Name: Aerosols
Class: 2.1 (6.1)

IMDG
UN number: UN1950
Shipping Name: Aerosols
Class: 2.1
EmS: F-D, S-U

XV. Regulatory Information:

MSDS - Material Safety Data Sheet

Product Name: LIQUID WRENCH WHITE LITHIUM GREASE WITH CERFLON

MSDS No.: L606

USA TSCA: All chemicals used are listed on the TSCA Inventory.
CERCLA RQ: Tetrachloroethylene: 100 lbs
SARA 302: Not listed as a Extremely Hazardous Substance
SARA 311/312 HAZARD CLASS: Acute, Chronic
SARA 313 REPORTABLE:
Tetrachloroethylene 127-18-4
Aliphatic Hydrocarbon 8052-41-3

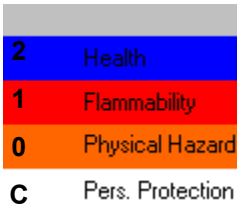
PROPOSITION 65 WARNING: This product product contains a chemical known to the State of California to cause cancer, birth defects and other reproductive harm.

State RTK Chemicals
Tetrachloroethylene 127-18-4
Aliphatic Hydrocarbon 8052-41-3
1,2,4-Trimethylbenzene 95-63-6
1,3,5-Trimethylbenzene 108-67-8
Xylene 1330-20-7

XVI. Other Information:

Chemical State: [X] Liquid [ ] Gas [ ] Solid
Chemical Type: [ ] Pure [X] Mixture

Hazard Category:
[X] Acute [X] Chronic [ ] Fire
[X] Pressure [ ] Reactive



Additional Manufacturer Warnings:

Do not used in confined area without proper ventilation. Contact lenses may cause further damage in case of splash into eye. KEEP AWAY FROM CHILDREN AND ANIMALS!

Additional Product Information:

While Radiator Specialty Company believes this data is accurate as of the revision date, we make no warranty with respect to the data and we expressly disclaim all liability for reliance thereon. The data is offered solely for information, investigation, and verification. Various government agencies may have specific regulations regarding the transportation, handling, storage, use, or disposal of this product which may not be covered by this MSDS. The user is responsible for full compliance.

Material Safety Data Sheet

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Vi-Jon Incorporated
8515 Page Avenue
Saint Louis, MO 63114

Phone: 314-427-1000
In Case of Spill Emergency Contact:
Chemtrec: 1-800-424-9300

Product Name: Spring Mint Antiseptic Mouthwash
Product Code: 072
Product Use: Mouthwash
Issue Date: 02/11/2008
Supersedes Date: None

Section 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Keep out of reach of children.
Appearance/Odor: Clear yellowish-green liquid with a mint medicinal odor and a sweet medicinal taste.

WARNING:
Flammable (ethyl alcohol)
Target (ethyl alcohol) respiratory system, skin, eyes, CNS, liver, blood and reproductive system.

Potential Health Effects: See Section 11 for more information.

Symptoms of Exposure:

Inhalation: May cause irritation of the respiratory tract.
Ingestion: May cause nausea, vomiting and diarrhea.
Eyes: May cause irritation to the eyes.
Skin: May cause irritation to the skin.

This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

This product contains a component that is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200):

Potential Environmental Effects: See Section 12 for more information.

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS#	% by Wt.
Ethyl Alcohol	64-17-5	18.5%

Section 4: FIRST AID MEASURES

Emergency first aid procedures by route of exposure:

Inhalation: If symptoms are experience, remove source of contamination or move victim to fresh air. If affected person is not breathing, apply artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion: Do not induce vomiting. If the material is swallowed, get medical attention or advice.

Skin: For skin contact, flush with water. If irritation persists, get medical attention.

Eyes: Immediately flush eyes with water for at least 15 minutes while holding eyelids open. If symptoms persist, get medical attention.

Section 5: FIRE FIGHTING MEASURES

Flash Point: 92°F
Method Used: Not Available
Auto Ignition: (Ethyl Alcohol) 363°C
Flammability Classification: Flammable Liquid IC

Extinguishing Media: Use methods appropriate for the surrounding fire. Consider water spray or fog, carbon dioxide, dry chemical powder, or alcohol resistant foam.

Products of Combustion: Upon decomposition this product may emit carbon dioxide, carbon monoxide and/or low molecular weight hydrocarbons.

Fire Fighting Equipment/Instructions: Wear protective clothing and equipment suitable for the surrounding fire, including helmet, facemask, and self contained breathing apparatus.

NFPA Rating: Health:1 Fire: 3 Reactivity:0
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: For large spills wear gloves, safety glasses and when levels exceed OSHA PEL use appropriate NIOSH approved respiratory protection. Keep unnecessary personnel away. Eliminate all sources of ignition or flammables that may come into contact with a spill of this material.

Environmental Precautions: Prevent discharge to open waters.

Method for Containment: Absorb spilled liquid in suitable non-flammable inert material such as clay, vermiculite or diatomaceous earth.

Methods for Clean-Up: Ventilate area of leak or spill. Use speak-proof tools to sweep or scrape up and containerize in approved chemical waste container. Wash spill area with water.

Section 7: HANDLING AND STORAGE

Handling: Keep away from heat, sparks and flame. Prevent contact with eyes. Avoid inhalation.

Storage: Keep the container tightly closed and in a cool, well ventilated place.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines
Ethyl Alcohol (64-17-5)
ACGIH: 1,000 ppm TWA
OSHA: 1,000 ppm TWA; 1,900 mg/m3 TWA

Engineering Controls: Normal room ventilation is usually adequate under normal use.

Personal Protective Equipment (PPE)
Eye/Face Protection: None needed under normal use.
Skin Protection: None needed under normal use.
Respiratory Protection: None needed under normal use.
General Hygiene Considerations: Wash hands after use.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Color: Clear Yellowish-Green
Odor: Mint, Medicinal
Physical State: Liquid
pH: 3.8 - 4.8
Vapor Density: (Ethyl Alcohol) 1.6
Boiling Point: (Ethyl Alcohol) 78.5°C
Vapor Pressure: (Ethyl Alcohol) 57.3 hPa at 20°C
Melting Point: (Ethyl Alcohol) -114.1°C
Freezing Point: Not Available
Flash Point (see section 5)
Flammability Properties (see section 5)
Solubility (in water): Soluble
Specific Gravity @ 25°C: 1.002 – 1.006
Evaporation Rate: Not Available
Octanol/Water partition coefficient (Kow): (Ethyl Alcohol): - 0.32
Auto-ignition temperature: (Ethyl Alcohol) 363°C
Decomposition temperature: Not Available

Section 10: STABILITY AND REACTIVITY

Stability: Stable under normal ambient temperatures 70°C (21°C)

Condition to Avoid: Avoid excessive heat or sources of ignition.

Incompatible Materials: This product reacts with strong acid, strong bases, and oxidizing agents.

Hazardous Decomposition: upon decomposition, this product evolves carbon monoxide, carbon dioxide, and/or low weight hydrocarbons.

Hazardous Reactions: Hazardous polymerization will not occur.

Section 11: TOXICOLOGY INFORMATION

ACUTE EFFECTS:

A: **General Product information**

Product contains ethyl alcohol. Not expected to cause irritation when used in accordance to label.

B: **Component Analysis LD50**

Ethyl Alcohol (64-17-5)
Oral LD50 Rat: 7060 mg/kg

CHRONIC EFFECTS:

Component

Ethyl Alcohol (64-17-5)
Carcinogenicity: ACGIH A4 – Not Classifiable as a Human Carcinogen

Neurotoxicity: This product contains ethyl alcohol, a central nervous system target.

Mutagenicity: No information available for product.

Reproductive: No information available for product.

Developmental: Ethyl alcohol is a developmental toxin when consumed during pregnancy.

Target Organs: When consumed, ethyl alcohol can target the respiratory system, skin, eyes, CNS, liver, blood and reproductive system.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity: Ethyl Alcohol (64-17-5)

Harmful to fish.
96 hour LC50 Oncorhynchus mykiss: 12,900 mg/L (flow-through) (30days old)
96 hour LC50 Pimephales promelas 14.2 mg/L
5 min EC50 Photobacterium phosphoreum: 35,470 mg/L
30 min EC50 Photobacterium phosphoreum: 34,634 mg/L
48 hour EC50 Daphnia magna: 9,268 mg/L
24 hour EC50 Daphnia magna: 10,800 mg/L

Section 13: DISPOSAL CONSIDERATIONS

Dispose of in accordance with federal, state, and local regulations.

Section 14: TRANSPORTATION INFORMATION

Shipping Name: Consumer Commodity ORM-D
Proper Shipping Name for Non-Consumer Commodity: Ethyl Alcohol Solutions, 3, UN1170, PGIII.

Section 15: REGULATORY INFORMATION

Ethyl alcohol, a component of this product, is on the TSCA inventory.

RCRA hazardous Waste Classification: D001

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)

This material contains ethyl alcohol, listed on Proposition 65 as developmental toxicity when in alcoholic beverages.

The following components appear on one or more of the following state hazardous substance lists:

Component	CAS#	CA	MA	MN	NJ	PA
Ethyl alcohol	64-17-5	YES	Yes	Yes	Yes	Yes

Section 16: Other Information

Prepared by: Vi-Jon Inc.

Disclaimer:
The information and recommendations contained in the Material Safety Data Sheet (MSDS) are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. The information and recommendations set forth herein are presented in good faith and believed to be correct as of this date hereof.

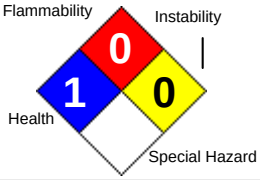
Vi-Jon, however, makes no representation as to the completeness or accuracy thereof, and information is supplied upon the express condition that the persons receiving the information will be required to make their own determination as to its suitability for their purposes prior to use. In no event will Vi-Jon be responsible for any damages of any nature whatsoever resulting from the use of, reliance upon, or the misuse of this information. User assumes all risk of use, storage and handling of the product in compliance with applicable federal, state and local laws and regulations.

NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY OTHER NATURE, ARE MADE BY VI-JON HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH THE INFORMATION REFERS. The information as supplied herein is simply to be informative and intended solely to alert the user of the substance which is the subject matter of this MSDS. The ultimate compliance with federal, state or local regulations concerning the use of this compound, or compliance with respect to product liability, rests solely upon the purchaser thereof.

This information relates to the material designated and may not be valid for such material used in combination with any other materials nor in any process.

MATERIAL SAFETY DATA SHEET
Mold Armor Instant Mold and Mildew Stain Remover

HEALTH	1
FLAMMABILITY	0
PHYSICAL	0
PPE	B



Printed: 08/02/2011
Revision: 04/20/2009
Supercedes Revision: 12/11/2007

1. Product and Company Identification

Product Code: 225.4D

Product Name: Mold Armor Instant Mold and Mildew Stain Remover

Manufacturer Information

Company Name: W. M. Barr
2105 Channel Avenue
Memphis, TN 38113

Phone Number: (901)775-0100

Emergency Contact: 3E 24 Hour Emergency Contact (800)451-8346

Information: W.M. Barr Customer Service (800)398-3892

Web site address: www.wmbarr.com

Preparer Name: W.M. Barr EHS Dept (901)775-0100

Synonyms

FG502

2. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	OSHA PEL	ACGIH TLV	Other Limits
1. Sodium hypochlorite {Hypochlorous acid, sodium salt}	7681-52-9	< 5.0 %	No data.	No data.	No data.

Hazardous Components (Chemical Name)	RTECS #	OSHA STEL	OSHA CEIL	ACGIH STEL	ACGIH CEIL
1. Sodium hypochlorite {Hypochlorous acid, sodium salt}	NH3486300	No data.	No data.	No data.	No data.

3. Hazards Identification

Emergency Overview

Warning: Eye & Skin Irritant. Harmful if Swallowed.

Potential Health Effects (Acute and Chronic)

Inhalation Acute Exposure Effects:
May cause irritation of respiratory tract and irritation of mucous membranes. If sodium hypochlorite is mixed with ammonia or other chemicals, evolution of chlorine or chlorine based compounds results. These gases can produce pulmonary edema. NEVER MIX WITH ANY OTHER CHEMICALS.

Skin Contact Acute Exposure Effects:
This product is a skin irritant. May cause redness and possibly inflammation of the skin. May cause chemical burns to broken skin.

Eye Contact Acute Exposure Effects:
This material is an eye irritant.

Ingestion Acute Exposure Effects:
Liquid can be corrosive to the mouth and throat, mucous membranes and stomach. Swallowing can burn the tissues, cause abdominal pain, nausea, vomiting, circulatory collapse, confusion, delirium, coma, and collapse. Swallowing large quantities can cause death.

Chronic Exposure Effects:

Prolonged or repeated contact may cause dermatitis and sensitization. May cause constant irritation of eyes and respiratory tract.

Signs and Symptoms Of Exposure

Primary routes of exposure:
Inhalation and dermal.

Medical Conditions Generally Aggravated By Exposure

Asthma or other pre-existing lung/respiratory illnesses.

OSHA Regulatory Status:

This material is classified as hazardous under OSHA regulations.

4. First Aid Measures

Emergency and First Aid Procedures

Inhalation:
If user experiences breathing difficulty, move to air free of vapors. Administer oxygen or artificial respiration until medical assistance can be rendered.

Skin contact:
Wash with soap and large quantities of water for at least 15 minutes. Seek medical attention if irritation from contact persists.

Eye contact:
Immediately flush eyes with water, remove any contact lens, continue flushing with water for at least 15 minutes. Get medical attention.

Ingestion:
If conscious, drink one or two glasses of water or milk, or give milk of magnesia. Never attempt to give anything by mouth to an unconscious person. Call your poison control center, hospital emergency room, or physician immediately.

Note to Physician

Call your local poison control center for further instructions.

5. Fire Fighting Measures

Flammability Classification:	N/A	
Flash Pt:	No data.	
Explosive Limits:	LEL: No data.	UEL: No data.
Autoignition Pt:	No data available.	

Fire Fighting Instructions

Self-contained respiratory protection should be provided for fire fighters fighting fires in buildings or confined areas. Use water spray to cool nearby containers and structures exposed to fire.

Flammable Properties and Hazards

This material is non-combustible.

Hazardous Combustion Products

No data available.

Extinguishing Media

Non-combustible liquid - use extinguishing media for underlying cause of fire.

Unsuitable Extinguishing Media

No data available.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled

Clean-up:
Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind, out of low areas, and ventilate closed spaces before entering.

Small spills:
Take up the spilled liquid with sand, earth, or other noncombustible absorbent material and place in a plastic container where applicable.

Large spills:
Dike far ahead of spill for later disposal.

Keep material out of sewers, storm drains, surface waters, and soil. Sodium hypochlorite is very toxic to aquatic life.

7. Handling and Storage

Precautions To Be Taken in Handling

Read carefully all cautions and directions on product label before use. Since empty container retains residue, follow all label warnings even after container is empty. Dispose of empty container according to all regulations. Do not reuse this container.

Precautions To Be Taken in Storing

Keep container tightly closed when not in use. Store in a cool, dry place. Protect from freezing. Avoid extreme high or low temperatures.

8. Exposure Controls/Personal Protection

Respiratory Equipment (Specify Type)

For OSHA controlled work place and other regular users -- Use only with adequate ventilation under engineered air control systems designed to prevent exceeding appropriate TLV. For occasional use, where engineered air control is not feasible, use properly maintained and properly fitted NIOSH approved respirators. A dust mask does not provide protection against vapors.

Eye Protection

Safety glasses, chemical goggles or face shields are recommended to safeguard against potential eye contact, irritation, or injury. Contact lenses should not be worn while working with chemicals.

Chemcial splash goggles or safety glasses with a faceshield should be worn if the possibility of splashing exists.

Protective Gloves

Wear impermeable gloves. Gloves contaminated with product should be discarded. Promptly remove clothing that becomes soiled with product.

Other Protective Clothing

Various application methods can dictate use of additional protective safety equipment, such as impermeable aprons, etc., to minimize exposure. Before reuse, thoroughly clean any clothing or protective equipment that has been contaminated by prior use. Discard any clothing or other protective equipment that cannot be decontaminated, such as gloves or shoes.

Engineering Controls (Ventilation etc.)

Use only with adequate ventilation to prevent build-up of vapors. Open all windows and doors. Use only with a cross ventilation of moving fresh air across the work area. If strong odor is noticed or you experience slight dizziness, headache, nausea, or eye-watering -- Stop -- ventilation is inadequate. Leave area immediately.

Work/Hygienic/Maintenance Practices

A source of clean water should be available in the work area for flushing eyes and skin.

Do not eat, drink, or smoke in the work area.

Wash hands thoroughly after use.

9. Physical and Chemical Properties

Physical States: [ ] Gas [X] Liquid [ ] Solid

Melting Point: No data.

Boiling Point: > 210 F (100.0 C)

Autoignition Pt: No data.

Flash Pt: No data.

Specific Gravity (Water = 1): 1.06

Bulk density: 8.84 LB/GA

Vapor Pressure (vs. Air or mm Hg): < 0.1 MM HG

Vapor Density (vs. Air = 1): > 1

Evaporation Rate: < 1

Solubility in Water: No data.

Solubility Notes

Completely soluble in water.

Percent Volatile: N.D.

pH: 12 - 13

Appearance and Odor

Light yellow, free and clear.

10. Stability and Reactivity

Stability: Unstable [ ] Stable [X]

Conditions To Avoid - Instability

No data available.

Incompatibility - Materials To Avoid

Incompatible with acids, ammonia, or other household chemicals. Do not mix with acids, ammonia, or other household chemicals as dangerous fumes may result.

Incompatible with strong oxidizing and reducing agents.

Hazardous Decomposition Or Byproducts

Thermal decomposition may produce chlorine gas.

Hazardous Polymerization: Will occur [ ] Will not occur [X]

Conditions To Avoid - Hazardous Polymerization

No data available.

11. Toxicological Information

No data available.

Chronic Toxicological Effects

No data available.

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. Sodium hypochlorite {Hypochlorous acid, sodium salt}	7681-52-9	n.a.	n.a.	n.a.	n.a.

12. Ecological Information

No data available.

13. Disposal Considerations

Waste Disposal Method

Dispose in accordance with applicable local, state, and federal regulations.

14. Transport Information

LAND TRANSPORT (US DOT)

DOT Proper Shipping Name No data available.

Additional Transport Information

For D.O.T. information, contact W.M. Barr Technical Services at 1-800-398-3892.

15. Regulatory Information

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Sodium hypochlorite {Hypochlorous acid, sodium salt}	7681-52-9	No	Yes 100 LB	No	No

US EPA CAA, CWA, TSCA

Hazardous Components (Chemical Name)	CAS #	EPA CAA	EPA CWA NPDES	EPA TSCA	CA PROP 65
1. Sodium hypochlorite {Hypochlorous acid, sodium salt}	7681-52-9	HAP, ODC ()	No	Inventory	No

SARA (Superfund Amendments and Reauthorization Act of 1986) Lists:

Sec.302: EPA SARA Title III Section 302 Extremely Hazardous Chemical with TPQ. * indicates 10000 LB TPQ if not volatile.

Sec.304: EPA SARA Title III Section 304: CERCLA Reportable + Sec.302 with Reportable Quantity. ** indicates statutory RQ.

Sec.313: EPA SARA Title III Section 313 Toxic Release Inventory. Note: -Cat indicates a member of a chemical category.

Sec.110: EPA SARA 110 Superfund Site Priority Contaminant List

TSCA (Toxic Substances Control Act) Lists:

Inventory: Chemical Listed in the TSCA Inventory.

5A(2): Chemical Subject to Significant New Rules (SNURS)

6A: Commercial Chemical Control Rules

8A: Toxic Substances Subject To Information Rules on Production

8A CAIR: Comprehensive Assessment Information Rules - (CAIR)

8A PAIR: Preliminary Assessment Information Rules - (PAIR)

8C: Records of Allegations of Significant Adverse Reactions

8D: Health and Safety Data Reporting Rules

8D TERM: Health and Safety Data Reporting Rule Terminations

12(b): Notice of Export

Other Important Lists:

CWA NPDES: EPA Clean Water Act NPDES Permit Chemical

CAA HAP: EPA Clean Air Act Hazardous Air Pollutant

CAA ODC: EPA Clean Air Act Ozone Depleting Chemical (1=CFC, 2=HCFC)

CA PROP 65: California Proposition 65

International Regulatory Lists:

EPA Hazard Categories:

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:

[X] Yes [ ] No Acute (immediate) Health Hazard

[X] Yes [ ] No Chronic (delayed) Health Hazard

[ ] Yes [X] No Fire Hazard

[ ] Yes [X] No Sudden Release of Pressure Hazard

[ ] Yes [X] No Reactive Hazard

16. Other Information

Company Policy or Disclaimer

The information contained herein is presented in good faith and believed to be accurate as of the effective date shown above. This information is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. Any use of this data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.

N.A.=Not available, N.P.=Not applicable, N.D.=Not determined, N.E.=Not established, N.R.=Not required

Material Safety Data Sheet

Data prepared: January 26, 2007 Data revised: 1st edition

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY

Product Name: New Stronger-Faster Gorilla Glue®

Product Type: Polyurethane adhesive for wood and wood substrates

Distributor: The Gorilla Glue Company
4550 Red Bank Expressway
Cincinnati, OH 45227
Tel: (513) 271-3300
Fax: (513) 527-3742
Emergency: During business hours: The Gorilla Glue Company: (800) 966-3458.
Outside business hours: Prosar International Poison Center: (800) 420-7186.

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No.	% content
Urethane prepolymer	trade secret	40-50
Polymeric MDI*	9016-87-9	50-60

*Polymeric MDI is a mixture of 4,4'-Diphenylmethane-diisocyanate, isomers and homologues.

3. HAZARDS IDENTIFICATION

Harmful by inhalation. Irritating to eyes, respiratory system and skin. May cause sensitization by inhalation and skin contact.

4. FIRST AID MEASURES

Inhalation If aerosol or vapour is inhaled in high concentrations: Move affected individual to fresh air and keep him warm, let him rest. If there is difficulty in breathing; call a doctor.

Eye contact Flush eyes for at least 10 minutes while holding eyelids open. Contact a doctor.

Skin contact Remove contaminated clothes immediately, and wash skin with a cleanser based on polyethylene glycol or with plenty of warm water and soap. Consult a doctor in the event of a skin reaction.

Ingestion Product is not intended to be ingested or eaten. If this product is ingested, severe irritation of the gastrointestinal tract may occur, and should be treated symptomatically. Do not induce the patient or animal to vomit. Call a doctor, ambulance or seek veterinarian assistance immediately.

5. FIRE FIGHTING MEASURES

Upper flammable limit (UFL): Not determined

Lower flammable limit (LFL): Not determined

NFPA: Health – 3, Flammability – 1, Reactivity – 1

HMIS: Health – 3, Flammability – 1, Reactivity – 1

General fire hazards

Down-wind personnel must be evacuated. Do not reseal contaminated containers; a chemical reaction generating carbon dioxide gas pressure may occur resulting in rupture of the container. Dense smoke is emitted when product is burned without sufficient oxygen. When using water spray, boil-over may occur when product temperature reaches the boiling point of water, and the reaction forming carbon dioxide will accelerate. MDI vapour and other gases may be generated by thermal decomposition.

Special hazards in fire
In case of fire, formation of carbon monoxide, carbon dioxide, nitrogen oxide, isocyanate vapour, and traces of hydrogen cyanide is possible.

Extinguishing Media
Carbon dioxide, dry powder, and foam. In cases of large scale fires, alcohol-resistant foams are preferred. If water is used, it should be used in very large quantities. The reaction between water and isocyanate may be vigorous.

Required special protective equipment for fire-fighters
Fire fighters should wear full-face, self-contained breathing apparatus and impervious protective clothing. Fire fighters should avoid inhaling any combustion products.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Wear full-protective clothing and respiratory protection as required maintaining exposures during clean-up below the applicable exposure limits.

Environmental precautions
Do not discharge spillage into drains.

Clean-up procedures
Remove mechanically; cover remainders with wet absorbent material (e. g. sand, earth, sawdust). After approx. one hour transfer to waste container and do not seal (evolution of CO_2). Keep damp in a safe ventilated area for several days.

7. HANDLING AND STORAGE

Handling
Avoid contact with skin and eye. Do not smoke, eat and drink at the work-place.
Ventilation: If vapour or mist is generated during processing or use, local exhaust ventilation should be provided to maintain exposures below the applicable limits.
Personal protection: see Section 8.

Storage
Keep product away from sources of alcohols, amines, or other materials that react with isocyanates. Avoid prolonged heating above 160°C/320°F. Store the product in tightly closed containers in a well-ventilated place and in accordance with national regulations. Keep out of reach of children.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

For exposure controls see Section 15.

Component exposure limits

Name	CAS no.	Type	ppm	mg/m³
4,4'-Diphenylmethane diisocyanate	101-68-8	OSHA PEL	0.02	0.2
		ACGIH (TLV-TWA)	0.005	

Personal protection equipment

General	Wear suitable protective clothing, protective gloves and protective goggles/mask.
Suitable materials for safety gloves	Natural rubber/natural latex – NR (>= 0.5 mm) Polychloroprene – CR (>= 0.5mm) Nitrile rubber – NBR (>= 0.35mm) Butyl rubber – IIR (>= 0.5 mm) Fluorinated rubber – FKM (>= 0.4 mm)

Personal protection equipment (continued)

Respiratory protection	Required in insufficiently ventilated working areas and during spraying. An air-fed mask, or for short periods of work, a combination of charcoal filter and particulate filter is recommended.
Eyes protection	Chemical goggles or full face shields are recommended. An eyewash fountain and safety shower should be available in the work area. Contact lenses should not be worn when working with this product.
Skin protection	Wear special gloves and working clothes to avoid skin irritation or sensitization. Depending on operation, chemical resistant boots, overshoes, and apron may also be required. Suitable materials for clothing: Polyethylene/ethylene vinyl alcohol laminates (PE/VAL) has been reported as an effective material of construction for chemical protective clothing for MDI.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical form. . . . . Liquid
Color . . . . . Dark-Brown
Odor . . . . . Earthy, musty
Boiling point . . . . . >300°C
Flash point . . . . . >250°C
Vapour pressure . . . . . <0,00001 mbar at 20° C (diphenyl-methane-diisocyanate)
Specific gravity . . . . . Approx. 1,14 g/cm^3 at 20° C
Viscosity . . . . . 4,000 – 7,000 mPa.s at 25°C (Brookfield sp. 6/20 rpm)
Solubility in water . . . . . reacts
Percent VOC 0%

10. STABILITY AND REACTIVITY

Stability

The product is stable under the recommended handling and storage conditions (see section 7).

Hazardous decomposition products

By exposure to high temperature, hazardous decomposition products may develop, such as isocyanate vapour and mist, carbon dioxide, carbon monoxide, nitrogen oxide, and traces of hydrogen cyanide.

Hazardous reaction

Exothermic reaction with amines and alcohols; reacts with water forming heat, CO_2, and insoluble polyurea. The combined effect of CO_2 and heat can produce enough pressure to rupture a closed container.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity	LD_{50} oral, rat: > 5000 mg/kg Skin and mucous membrane compatibility, rabbit: Skin 8 hour's exposure – slight reddening. Eyes – moderate reddening and slight swelling.
Inhalation	Over-exposure may cause irritating effects on nose throat and respiratory tract.
Skin contact	Prolonged or repeated contact may result in tanning and irritating effects.
Eye contact	Over-exposure may cause irritating effects on eyes.

12. ECOLOGICAL INFORMATION

Do not allow the product to escape into waters, wastewater or soil.

Biodegradability	0% after 28 days
Acute fish toxicity	LC0 > 1,000 mg/l (96 hrs.)
Toxicity for daphnia	EC 50 > 1,000 mg/l (24 hrs.)
Acute bacteria toxicity	EC 50 > 100 mg/l (3 hrs.)

13. DISPOSAL CONSIDERATIONS

The product remnants are classified as chemical waste. Dispose of waste according to Local, State, Federal, and Provincial Environmental Regulations.

14. TRANSPORTATION INFORMATION

This preparation is not classified dangerous according to international transport regulations ADR/RID/IMDG/IATA.

Other information: This product is not dangerous cargo. Irritating to skin and mucous membranes. Keep separated from foodstuffs.

15. REGULATION INFORMATION

This product and its components are listed on the TSCA 8(b) inventory.

Symbol	
Hazard designation	Xn – Harmful.
Contains	4,4'- Diphenylmethane diisocyanate (MDI), isomere.
R-phrases	R20 – Harmful by inhalation. R36/37/38 – Irritating to eyes, respiratory system and skin. R42/43 – May cause sensitization by inhalation and skin contact.
S-phrases	S23 – Do not breathe gas/fumes/vapour/spray. S36/37 – Wear suitable protective clothing and gloves. S45 – In case of accident or if you feel unwell, seek medical advice immediately. (show the label where possible).

Any existing national regulations on the handling of isocyanates must be observed.

16. OTHER INFORMATION

The information herein is presented in good faith and believed to be accurate as of the effective date given. However, no warranty, expressed or implied, is given. It is the buyer's responsibility to ensure that its activities comply with Federal, State or Provincial, and Local laws.

The Gorilla Glue Company does not test on animals, nor do we require our suppliers to test on animals. Any information provided in this MSDS is based on existing scientific testing of the various raw materials, and is not commissioned by this Company.

Date 01/26/2007

Safety Data Sheet for New Stronger-Faster Gorilla Glue

Material Safety Data Sheet

Nitrogen

Section 1. Chemical product and company identification

Product name : Nitrogen

Supplier : AIRGAS INC., on behalf of its subsidiaries
259 North Radnor-Chester Road
Suite 100
Radnor, PA 19087-5283
1-610-687-5253

Product use : Synthetic/Analytical chemistry. Liquid – cryogenic coolant.

Synonym : nitrogen (dot); nitrogen gas; Nitrogen NF, LIN, Cryogenic Liquid Nitrogen, Liquid Nitrogen

MSDS # : 001040

Date of Preparation/Revision : **1/14/2011.**

In case of emergency : 1-866-734-3438

Section 2. Hazards identification

Physical state : Gas. [NORMALLY A COLORLESS GAS: MAY BE A CLEAR COLORLESS LIQUID AT LOW TEMPERATURES. SOLD AS A COMPRESSED GAS OR LIQUID IN STEEL CYLINDERS.]

Emergency overview : WARNING!

GAS:
CONTENTS UNDER PRESURE.
Do not puncture or incinerate container.
Can cause rapid suffocation.
May cause severe frostbite.
LIQUID:
Extremely cold liquid and gas under pressure.
Can cause rapid suffocation.
May cause severe frostbite.

Do not puncture or incinerate container.

Contact with rapidly expanding gases or liquids can cause frostbite.

Routes of entry : Inhalation

Potential acute health effects

Eyes : Contact with rapidly expanding gas may cause burns or frostbite. Contact with cryogenic liquid can cause frostbite and cryogenic burns.

Skin : Contact with rapidly expanding gas may cause burns or frostbite. Contact with cryogenic liquid can cause frostbite and cryogenic burns.

Inhalation : Acts as a simple asphyxiant.

Ingestion : Ingestion is not a normal route of exposure for gases. Contact with cryogenic liquid can cause frostbite and cryogenic burns.

Medical conditions aggravated by over-exposure : Acute or chronic respiratory conditions may be aggravated by overexposure to this gas.

See toxicological information (Section 11)

Section 3. Composition, Information on Ingredients

Name	CAS number	% Volume	Exposure limits
Nitrogen	7727-37-9	100	Oxygen Depletion [Asphyxiant]

Section 4. First aid measures

No action shall be taken involving any personal risk or without suitable training.If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus.It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

Skin contact : None expected.

Frostbite : Try to warm up the frozen tissues and seek medical attention.

Inhalation : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Ingestion : As this product is a gas, refer to the inhalation section.

Section 5. Fire-fighting measures

Flammability of the product : Non-flammable.

Products of combustion : Decomposition products may include the following materials:
nitrogen oxides

Fire-fighting media and instructions : Use an extinguishing agent suitable for the surrounding fire.

Apply water from a safe distance to cool container and protect surrounding area. If involved in fire, shut off flow immediately if it can be done without risk.

Contains gas under pressure. In a fire or if heated, a pressure increase will occur and the container may burst or explode.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions : Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment (section 8). Shut off gas supply if this can be done safely. Isolate area until gas has dispersed.

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Methods for cleaning up : Immediately contact emergency personnel. Stop leak if without risk. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Section 7. Handling and storage

Handling : High pressure gas. Do not puncture or incinerate container. Use equipment rated for cylinder pressure. Close valve after each use and when empty. Protect cylinders from physical damage; do not drag, roll, slide, or drop. Use a suitable hand truck for cylinder movement.
Never allow any unprotected part of the body to touch uninsulated pipes or vessels that contain cryogenic liquids. Prevent entrapment of liquid in closed systems or piping without pressure relief devices. Some materials may become brittle at low temperatures and will easily fracture.

Storage : Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Cylinder temperatures should not exceed 52 °C (125 °F).
For additional information concerning storage and handling refer to Compressed Gas Association pamphlets P-1 Safe Handling of Compressed Gases in Containers and P-12 Safe Handling of Cryogenic Liquids available from the Compressed Gas Association, Inc.

Section 8. Exposure controls/personal protection

Engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Personal protection

Eyes : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

When working with cryogenic liquids, wear a full face shield.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

The applicable standards are (US) 29 CFR 1910.134 and (Canada) Z94.4-93

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Insulated gloves suitable for low temperatures

Personal protection in case of a large spill : Self-contained breathing apparatus (SCBA) should be used to avoid inhalation of the product.

Product name

Nitrogen	Oxygen Depletion [Asphyxiant]

Consult local authorities for acceptable exposure limits.

Section 9. Physical and chemical properties

Molecular weight : 28.02 g/mole

Molecular formula : N2

Boiling/condensation point : -195.8°C (-320.4°F)

Melting/freezing point : -210°C (-346°F)

Critical temperature : -146.9°C (-232.4°F)

Vapor density : 0.967 (Air = 1) Liquid Density@BP: 50.46 lb/ft3 (808.3 kg/m3)

Specific Volume (ft^3/lb) : 13.8889

Gas Density (lb/ft^3) : 0.072

Section 10. Stability and reactivity

Stability and reactivity : The product is stable.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11. Toxicological information

Toxicity data

Other toxic effects on humans : No specific information is available in our database regarding the other toxic effects of this material to humans.

Specific effects

Carcinogenic effects : No known significant effects or critical hazards.

Mutagenic effects : No known significant effects or critical hazards.

Reproduction toxicity : No known significant effects or critical hazards.

Section 12. Ecological information

Aquatic ecotoxicity

Not available.

Environmental fate : Not available.

Environmental hazards : No known significant effects or critical hazards.

Toxicity to the environment : Not available.

Section 13. Disposal considerations

Product removed from the cylinder must be disposed of in accordance with appropriate Federal, State, local regulation.Return cylinders with residual product to Airgas, Inc.Do not dispose of locally.

Section 14. Transport information

Regulatory information	UN number	Proper shipping name	Class	Packing group	Label	Additional information
DOT Classification	UN1066 UN1977	NITROGEN, COMPRESSED Nitrogen, refrigerated liquid	2.2	Not applicable (gas).		**Limited quantity** Yes. **Packaging instruction** **Passenger aircraft** Quantity limitation: 75 kg **Cargo aircraft** Quantity limitation: 150 kg
TDG Classification	UN1066 UN1977	NITROGEN, COMPRESSED Nitrogen, refrigerated liquid	2.2	Not applicable (gas).		**Explosive Limit and Limited Quantity Index** 0.125 **Passenger Carrying Road or Rail Index** 75
Mexico Classification	UN1066 UN1977	NITROGEN, COMPRESSED Nitrogen, refrigerated liquid	2.2	Not applicable (gas).		-

"Refer to CFR 49 (or authority having jurisdiction) to determine the information required for shipment of the product."

Section 15. Regulatory information

United States

U.S. Federal regulations :

TSCA 8(a) IUR: Partial exemption
United States inventory (TSCA 8b): This material is listed or exempted.

SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: Nitrogen
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Nitrogen: Sudden release of pressure

State regulations :

Connecticut Carcinogen Reporting: This material is not listed.
Connecticut Hazardous Material Survey: This material is not listed.
Florida substances: This material is not listed.
Illinois Chemical Safety Act: This material is not listed.
Illinois Toxic Substances Disclosure to Employee Act: This material is not listed.
Louisiana Reporting: This material is not listed.
Louisiana Spill: This material is not listed.
Massachusetts Spill: This material is not listed.
Massachusetts Substances: This material is listed.
Michigan Critical Material: This material is not listed.
Minnesota Hazardous Substances: This material is not listed.
New Jersey Hazardous Substances: This material is listed.
New Jersey Spill: This material is not listed.
New Jersey Toxic Catastrophe Prevention Act: This material is not listed.
New York Acutely Hazardous Substances: This material is not listed.
New York Toxic Chemical Release Reporting: This material is not listed.
Pennsylvania RTK Hazardous Substances: This material is listed.
Rhode Island Hazardous Substances: This material is not listed.

Canada

WHMIS (Canada) : Class A: Compressed gas.

CEPA Toxic substances: This material is not listed.
Canadian ARET: This material is not listed.
Canadian NPRI: This material is not listed.
Alberta Designated Substances: This material is not listed.
Ontario Designated Substances: This material is not listed.
Quebec Designated Substances: This material is not listed.

Section 16. Other information

United States

Label requirements :

GAS:
CONTENTS UNDER PRESURE.
Do not puncture or incinerate container.
Can cause rapid suffocation.
May cause severe frostbite.
LIQUID:
Extremely cold liquid and gas under pressure.
Can cause rapid suffocation.
May cause severe frostbite.

Canada

Label requirements : Class A: Compressed gas.

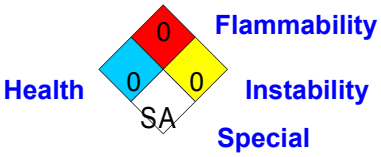
Hazardous Material Information System (U.S.A.) :

Health	0
Flammability	0
Physical hazards	0

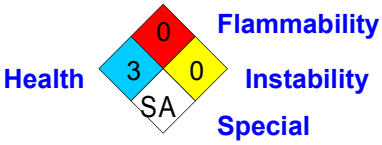
liquid:

Health	3
Fire hazard	0
Reactivity	0
Personal protection	

National Fire Protection Association (U.S.A.) :



liquid:



Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Material Safety Data Sheet

Nitrous Oxide

Section 1. Chemical product and company identification

Product name : Nitrous Oxide

Supplier : AIRGAS INC., on behalf of its subsidiaries
259 North Radnor-Chester Road
Suite 100
Radnor, PA 19087-5283
1-610-687-5253

Product use : Synthetic/Analytical chemistry.

Synonym : Nitrogen oxide (N2O); Dinitrogen monoxide; Dinitrogen oxide; Laughing gas; N2O; Factitious air; Hyponitrous acid anhydride; Nitrogen oxide; UN 1070; UN 2201; Nitrogen Monoxide; Nitral; Diazyne 1-oxide; NITROUS OXIDE, REFRIGERATED LIQUID

MSDS # : 001042

Date of Preparation/Revision : **4/26/2010.**

In case of emergency : 1-866-734-3438

Section 2. Hazards identification

Physical state : Gas. [COLORLESS LIQUEFIED COMPRESSED GAS. ODORLESS OR WITH A MILD SWEET ODOR. [INHALATION ANESTHETIC] [NOTE: SHIPPED AS A LIQUIFIED COMPRESSED GAS]]

Emergency overview : DANGER!

GAS:
OXIDIZER.
CONTENTS UNDER PRESURE.
MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.
CONTACT WITH COMBUSTIBLE MATERIAL MAY CAUSE FIRE.
Do not puncture or incinerate container.
Can cause rapid suffocation.
May cause severe frostbite.
LIQUID:
OXIDIZER.
MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.
CONTACT WITH COMBUSTIBLE MATERIAL MAY CAUSE FIRE.
Extremely cold liquid and gas under pressure.
Can cause rapid suffocation.
May cause severe frostbite.

Do not puncture or incinerate container. May cause target organ damage, based on animal data. Store in tightly-closed container. Avoid contact with combustible materials.

Contact with rapidly expanding gases or liquids can cause frostbite.

Target organs : May cause damage to the following organs: the reproductive system, upper respiratory tract, central nervous system (CNS).

Routes of entry : Inhalation

Potential acute health effects

Eyes : May cause eye irritation. Contact with rapidly expanding gas may cause burns or frostbite. Contact with cryogenic liquid can cause frostbite and cryogenic burns.

Skin : May cause skin irritation. Contact with rapidly expanding gas may cause burns or frostbite. Contact with cryogenic liquid can cause frostbite and cryogenic burns.

Inhalation : Acts as a simple asphyxiant.

Ingestion : Ingestion is not a normal route of exposure for gases. Contact with cryogenic liquid can cause frostbite and cryogenic burns.

Potential chronic health effects : **CARCINOGENIC EFFECTS**: A4 (Not classifiable for humans or animals.) by ACGIH, 3 (Not classifiable for humans.) by IARC.
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

See toxicological information (section 11)

Section 3. Composition, Information on Ingredients

Name	CAS number	% Volume	Exposure limits
Nitrous Oxide	10024-97-2	100	**ACGIH TLV (United States, 1/2008).** TWA: 90 mg/m³ 8 hour(s). TWA: 50 ppm 8 hour(s). **NIOSH REL (United States, 6/2008).** TWA: 46 mg/m³ 10 hour(s). TWA: 25 ppm 10 hour(s).

Section 4. First aid measures

No action shall be taken involving any personal risk or without suitable training.If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus.It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

Skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.

Frostbite : Try to warm up the frozen tissues and seek medical attention.

Inhalation : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Ingestion : As this product is a gas, refer to the inhalation section.

Section 5. Fire-fighting measures

Flammability of the product : Non-flammable.

Products of combustion : Decomposition products may include the following materials:
nitrogen oxides

Fire hazards in the presence of various substances : Extremely flammable in the presence of the following materials or conditions: reducing materials and combustible materials.

Fire-fighting media and instructions : Use an extinguishing agent suitable for the surrounding fire.

Apply water from a safe distance to cool container and protect surrounding area. If involved in fire, shut off flow immediately if it can be done without risk.

Contains gas under pressure. Contact with combustible material may cause fire. This material increases the risk of fire and may aid combustion. In a fire or if heated, a pressure increase will occur and the container may burst or explode.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions : Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment (section 8). Eliminate all ignition sources if safe to do so. Do not touch or walk through spilled material. Shut off gas supply if this can be done safely. Isolate area until gas has dispersed.

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Methods for cleaning up : Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Section 7. Handling and storage

Handling : High pressure gas. Do not puncture or incinerate container. Use equipment rated for cylinder pressure. Close valve after each use and when empty. Store in tightly-closed container. Avoid contact with combustible materials. Protect cylinders from physical damage; do not drag, roll, slide, or drop. Use a suitable hand truck for cylinder movement.

Never allow any unprotected part of the body to touch uninsulated pipes or vessels that contain cryogenic liquids. Prevent entrapment of liquid in closed systems or piping without pressure relief devices. Some materials may become brittle at low temperatures and will easily fracture.

Storage : Keep container tightly closed. Keep container in a cool, well-ventilated area. Separate from acids, alkalies, reducing agents and combustibles. Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Cylinder temperatures should not exceed 52 °C (125 °F).

For additional information concerning storage and handling refer to Compressed Gas Association pamphlets P-1 Safe Handling of Compressed Gases in Containers and P-12 Safe Handling of Cryogenic Liquids available from the Compressed Gas Association, Inc.

Section 8. Exposure controls/personal protection

Engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Personal protection

Eyes : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

When working with cryogenic liquids, wear a full face shield.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

The applicable standards are (US) 29 CFR 1910.134 and (Canada) Z94.4-93

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Insulated gloves suitable for low temperatures

Personal protection in case of a large spill : Self-contained breathing apparatus (SCBA) should be used to avoid inhalation of the product.

Product name

Nitrous Oxide

dinitrogen oxide

ACGIH TLV (United States, 1/2008).
TWA: 90 mg/m³ 8 hour(s).
TWA: 50 ppm 8 hour(s).
NIOSH REL (United States, 6/2008).
TWA: 46 mg/m³ 10 hour(s).
TWA: 25 ppm 10 hour(s).

Consult local authorities for acceptable exposure limits.

Section 9. Physical and chemical properties

Molecular weight : 44.02 g/mole

Molecular formula : N2-O

Boiling/condensation point : -88°C (-126.4°F)

Melting/freezing point : -91°C (-131.8°F)

Critical temperature : 36.6°C (97.9°F)

Vapor pressure : 745 (psig)

Vapor density : 1.53 (Air = 1) Liquid Density@BP: 76.8 lb/ft3 (1230 kg/m3)

Specific Volume (ft ^{3}/lb) : 8.6957

Gas Density (lb/ft ^{3}) : 0.115

Section 10. Stability and reactivity

Stability and reactivity : The product is stable.

Incompatibility with various substances : Extremely reactive or incompatible with the following materials: oxidizing materials, reducing materials and combustible materials.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11. Toxicological information

Toxicity data

Chronic effects on humans : **CARCINOGENIC EFFECTS**: A4 (Not classifiable for humans or animals.) by ACGIH, 3 (Not classifiable for humans.) by IARC.
May cause damage to the following organs: the reproductive system, upper respiratory tract, central nervous system (CNS).

Other toxic effects on humans : No specific information is available in our database regarding the other toxic effects of this material to humans.

Specific effects

Carcinogenic effects : No known significant effects or critical hazards.

Mutagenic effects : No known significant effects or critical hazards.

Reproduction toxicity : No known significant effects or critical hazards.

Section 12. Ecological information

Aquatic ecotoxicity

Not available.

Environmental fate : Not available.

Environmental hazards : No known significant effects or critical hazards.

Toxicity to the environment : Not available.

Section 13. Disposal considerations

Product removed from the cylinder must be disposed of in accordance with appropriate Federal, State, local regulation.Return cylinders with residual product to Airgas, Inc.Do not dispose of locally.

Section 14. Transport information

Regulatory information	UN number	Proper shipping name	Class	Packing group	Label	Additional information
DOT Classification	UN1070 UN2201	NITROUS OXIDE Nitrous oxide, refrigerated liquid	2.2	Not applicable (gas).		**Limited quantity** Yes. **Packaging instruction** **Passenger aircraft** Quantity limitation: 75 kg **Cargo aircraft** Quantity limitation: 150 kg
TDG Classification	UN1070 UN2201	NITROUS OXIDE Nitrous oxide, refrigerated liquid	2.2	Not applicable (gas).		**Explosive Limit and Limited Quantity Index** 0 **ERAP Index** 3000 **Passenger Carrying Ship Index** 450 **Passenger Carrying Road or Rail Index** 75
Mexico Classification	UN1070 UN2201	NITROUS OXIDE Nitrous oxide, refrigerated liquid	2.2	Not applicable (gas).		-

“Refer to CFR 49 (or authority having jurisdiction) to determine the information required for shipment of the product.”

Section 15. Regulatory information

United States

U.S. Federal regulations :

United States inventory (TSCA 8b): This material is listed or exempted.

SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: dinitrogen oxide
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: dinitrogen oxide: Fire hazard, Sudden release of pressure, Delayed (chronic) health hazard

Clean Water Act (CWA) 307: No products were found.

Clean Water Act (CWA) 311: No products were found.

Clean Air Act (CAA) 112 accidental release prevention: No products were found.

Clean Air Act (CAA) 112 regulated flammable substances: No products were found.

Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

State regulations :

Connecticut Carcinogen Reporting: This material is not listed.
Connecticut Hazardous Material Survey: This material is not listed.
Florida substances: This material is not listed.
Illinois Chemical Safety Act: This material is not listed.
Illinois Toxic Substances Disclosure to Employee Act: This material is not listed.
Louisiana Reporting: This material is not listed.
Louisiana Spill: This material is not listed.
Massachusetts Spill: This material is not listed.
Massachusetts Substances: This material is listed.
Michigan Critical Material: This material is not listed.
Minnesota Hazardous Substances: This material is not listed.
New Jersey Hazardous Substances: This material is listed.
New Jersey Spill: This material is not listed.
New Jersey Toxic Catastrophe Prevention Act: This material is not listed.
New York Acutely Hazardous Substances: This material is not listed.
New York Toxic Chemical Release Reporting: This material is not listed.
Pennsylvania RTK Hazardous Substances: This material is listed.
Rhode Island Hazardous Substances: This material is not listed.

California Prop. 65 :

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
Nitrous Oxide	No.	Yes.	No.	No.

Canada

WHMIS (Canada) :

Class A: Compressed gas.
Class C: Oxidizing material.
Class D-2A: Material causing other toxic effects (Very toxic).

CEPA Toxic substances: This material is listed.
Canadian ARET: This material is not listed.
Canadian NPRI: This material is not listed.
Alberta Designated Substances: This material is not listed.
Ontario Designated Substances: This material is not listed.
Quebec Designated Substances: This material is not listed.

Section 16. Other information

United States

Label requirements : GAS:
OXIDIZER.
CONTENTS UNDER PRESURE.
MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.
CONTACT WITH COMBUSTIBLE MATERIAL MAY CAUSE FIRE.
Do not puncture or incinerate container.
Can cause rapid suffocation.
May cause severe frostbite.
LIQUID:
OXIDIZER.
MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.
CONTACT WITH COMBUSTIBLE MATERIAL MAY CAUSE FIRE.
Extremely cold liquid and gas under pressure.
Can cause rapid suffocation.
May cause severe frostbite.

Canada

Label requirements : Class A: Compressed gas.
Class C: Oxidizing material.
Class D-2A: Material causing other toxic effects (Very toxic).

Hazardous Material Information System (U.S.A.) :

Health	*	0
Flammability		0
Physical hazards		2

liquid:

Health		3
Fire hazard		0
Reactivity		0
Personal protection		

National Fire Protection Association (U.S.A.) :

liquid:

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

MATERIAL SAFETY DATA SHEET

OFFICE DEPOT CLEANING DUSTER

SECTION I CHEMICAL PRODUCT AND COMPANY IDENTIFCATION

Product Name:	OFFICE DEPOT CLEANING DUSTER	
Product Number:	0329576 (QPL0100) & **0616959 (QPL0300)**	
Chemical Name:	1,1,1,2-Tetrafluoroethane	
Manufacturer:	QPL, INC.	
Address:	800 S. ACADIA ROAD	
	THIBODAUX, LA 70301	
Telephone Number:	(985) 449-0660	
Web Site:	www.qplchem.com	
Emergency numbers:	Chemtrec	(800) 424-9300
	Control Center (Louisiana)	(800) 256-9822
Date Prepared:	8/00 **Revised 10/09**	

SECTION II HAZARDOUS COMPONENTS

Hazardous Components:	Case No.	ACGIH TLV	PEL (OSHA)
1,1,1,2-Tetrafluoroethane	811-97-2	Not Est.	Not Est.
Ethanol	**64-17-5**	**Low order of toxicity**	
Denatonium Benzoate	**3734-33-6**	**(LD50):58 mg/kg [rat]**	

Notes:

(1) NPCA-HMIS Rating:	Health:	1
	Flammability:	0
	Reactivity:	0
	Personal Protection:	X (See Section VIII)

This Chemical is not listed as a Carcinogen or potential Carcinogen with: NTP Status, IARC Status or OSHA list.

SECTION III PHYSICAL DATA

Boiling Point:	-15.7*F @ 736 mm Hg
Solubility in water:	Slight
Vapor pressure:	96 psia @ 70*F
Volatiles (% by weight):	100%
Vapor Density (Air = 1):	3
Density:	1.20 g/cc @ 77*F

Description: A colorless, clear liquefied gas with a slight ethereal odor. Bitter taste.

SECTION IV FIRE & EXPLOSION HAZARDS

Flash Point: None Method Used: TOC
Flammable Limits: NOT APPLICABLE
Extinguishing Media: As appropriate for combustibles in area
Special fire fighting procedures: Self-contained breathing apparatus. Positive pressure type.
Unusual fire and explosion hazards: None (material itself is not flammable)

SECTION V REACTIVITY DATA

Stability: Yes
Incompatibility (Materials to Avoid): Strong oxidizers and high temperatures above 130*F. Strong acids or bases. Alkaline earth materials.
Hazardous Polymerization: Will not occur.
Conditions to Avoid: High temperatures and sources of ignition such as sparks.

Hazardous Decomposition Products: Source – High Heat, forming hydrofluoric acid and possible carbonyl fluorine.

SECTION VI HEALTH HAZARD DATA

Primary Routes of Entry; Effects of Overexposure:

Eye: Acute – irritation and redness, tearing and blurred vision.
Inhalation: Acute – excessive inhalation may cause temporary alteration of the heart's electrical activity with irregular pulse, palpitations or inadequate circulation. Intentional misuse can be fatal.
Skin: Prolong and excessive skin contact may cause frostbite.
Ingestion: Not considered a potential route of entry. (Do not administer adrenaline following exposure.)

EMERGENCY / FIRST AID PROCEDURES:

If in Eyes: Flush with water for 15 minutes. Seek medical help if irritation persists.
If on Skin: Wash with soap and water. If frostbit treat by warming affected area.
If Swallowed: Not considered a potential route of entry.
If inhaled: Remove to fresh air. Administer artificial respiration, if needed. If breathing is difficult give oxygen. Call a physician.

Note to Physician: Because of possible disturbances of cardiarhythm, catecholamine drugs, such as epinephrine, should be considered only as a last resort in a life threatening emergencies.

SECTION VII PRECAUTIONS FOR SAFE HANDLING AND USE

If Material is released or spilled: Ventilate area – especially low areas where heavy vapors may collect. Protect from open flames.
Waste Disposal Method: ***DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS****
Handling/Storing Precautions: Store in a dry area, away from heat sources or high ambient temperature. OK to store at freezing temperatures.
Other Precautions: Keep away from children. For professional or industrial use only.

SECTION VIII SPECIAL PROTECTION DATA

Respiratory: No respiratory protection is needed under normal outdoor or well-ventilated working conditions.
Ventilation: Provide normal ventilation for standard manufacturing procedures.
Eyes: Splash proof safety glasses/goggles are recommended. See safety consultant.
Gloves: Butyl rubber or neoprene is recommended for prolonged contact.

SECTION IX SPECIAL PRECAUTIONS

Aquatic Toxicity: Not Applicable

Shipping Information:

Proper Shipping Name:	1,1,1,2-tetrafluoroethane
Hazard Class:	Non-flammable gas, 2.2
UN#:	3159
DOT/IATA Label:	Non-flammable Gas

Air Freight Method:

DOMESTIC (DOT) & INTERNATIONAL AIR (IATA)
Passenger - Package max. Wt. 75kg
Cargo – Package max. Wt. 150kg

NA = not applicable	ND = not determined	< = less than
> = Greater than	UNK = unknown	

NOTE: The information accumulated herein is believed to be accurate but in not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.

Material Safety Data Sheet

Section 1. Chemical Product and Company Identification

Common Name	**Office Depot Screen Cleaner**
Supplier	Office Depot
Synonym	Screen Cleaner
Trade name	Screen Cleaner
Material Uses	Screen Cleaner
Manufacturer	Petro Chemical Products, Inc. 2910 West Beaver Street Jacksonville, Florida 32254 (904) 981-4135

Code	503000236
MSDS#	236
Validation Date	**2/4/2000**
Print Date	2/4/2000
Responsible Name	**Technical Department**

In Case of Emergency Chemtrec
1-800-424-9300
1-202-483-7616

Section 2. Composition and Information on Ingredients

Name	CAS #	% by Weight	Exposure Limits
1) Water	7732-18-5	80-95	Not available.
2) Isopropyl Alcohol	67-63-0	1-10	TWA: 400 (ppm) from OSHA (PEL) [United States] TWA: 400 (ppm) from ACGIH (TLV) [United States]
3) Ethylene Glycol Monobutyl Ether	111-76-2	1-5	TWA: 50 (ppm) from OSHA (PEL) [United States] SKIN TWA: 25 (ppm) from ACGIH (TLV) [United States] SKIN

Section 3. Hazards Identification

Physical State and Appearance Liquid Pump Spray

Emergency Overview
DANGER!
FLAMMABLE.
Keep away from heat, sparks and flame. Keep container closed. Use only with adequate ventilation. Keep out of reach of children.

Routes of Entry Skin, Eyes, Ingestion

Potential Acute Health Effects

Eyes This product may irritate eyes upon contact.

Skin This product may irritate skin upon contact.

Inhalation Not available.

Ingestion May be harmful if swallowed. May cause nausea or stomach pain.

Potential Chronic Health Effects NO carcinogenic effect.

Medical Conditions Aggravated by Overexposure: Repeated or prolonged exposure is not known to aggravate medical condition.

Continued on Next Page

Overexposure /Signs/Symptoms	Not available.
See Toxicological Information (section 11)	

Section 4. First Aid Measures

Eye Contact	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.
Skin Contact	In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Cold water may be used.Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Ingestion	Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.
Notes to Physician	Not available.

Section 5. Fire Fighting Measures

Flammability of the Product	FLAMMABLE.
Auto-ignition Temperature	Not available.
Flash Points	CLOSED CUP: 52°C (126°F)
Flammable Limits	Not available.
Products of Combustion	Not available.
Fire Hazards in Presence of Various Substances	FLAMMABLE.
Explosion Hazards in Presence of Various Substances	Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.
Fire Fighting Media and Instructions	Flammable liquid, soluble or dispersed in water. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use alcohol foam, water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.
Protective Clothing (Fire)	Be sure to use an approved/certified respirator or equivalent.
Special Remarks on Fire Hazards	Not available.
Special Remarks on Explosion Hazards	Not available.

Continued on Next Page

Section 6. Accidental Release Measures

Small Spill and Leak	Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.
Large Spill and Leak	No special measures are typically indicated.

Section 7. Handling and Storage

Handling	Keep container closed. Use only with adequate ventilation. Store and use away from heat, sparks, open flame, or any other ignition source.
Storage	Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame). Keep out of reach of children.

Section 8. Exposure Controls/Personal Protection

Engineering Controls	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.
Personal Protection	
Eyes	Safety glasses.
Body	Work uniform or laboratory coat.
Respiratory	Wear appropriate respirator when ventilation is inadequate.
Hands	No special recommendations.
Feet	Not applicable.
Protective Clothing (Pictograms)	
Personal Protection in Case of a Large Spill	Gloves. Safety glasses.

Product Name	Exposure Limits
1) Water	Not available.
2) Isopropyl Alcohol	TWA: 400 (ppm) from OSHA (PEL) [United States] TWA: 400 (ppm) from ACGIH (TLV) [United States]
3) Ethylene Glycol Monobutyl Ether	TWA: 50 (ppm) from OSHA (PEL) [United States] SKIN TWA: 25 (ppm) from ACGIH (TLV) [United States] SKIN

Consult local authorities for acceptable exposure limits.

Section 9. Physical and Chemical Properties

Physical State and Appearance	Liquid Pump Spray
Molecular Weight	Not applicable.
Molecular Formula	Not applicable.
pH (1% Soln/Water)	Not available.
Boiling/Condensation Point	The lowest known value is 100°C (212°F) (Water).
Melting/Freezing Point	May start to solidify at 0°C (32°F) based on data for: Water.

Odor	Slight.
Taste	Not available.
Color	Blue. (Light.)

Continued on Next Page

Critical Temperature	Not available.
Specific Gravity	1 (Water = 1)
Vapor Pressure	Not available.
Vapor Density	Not available.
Volatility	Not available.
Odor Threshold	Not available.
Evaporation Rate	Not available.
VOC	8%
Viscosity	Not available.
$LogK_{ow}$	Not available.
Ionicity (in Water)	Amphoteric. (Water).
Dispersion Properties	See solubility in water, methanol, acetone.
Solubility	Easily soluble in cold water, hot water, methanol, acetone.
Physical Chemical Comments	Not available.

Section 10. Stability and Reactivity

Stability and Reactivity	The product is stable.
Conditions of Instability	Not available.
Incompatibility with Various Substances	Not available.
Hazardous Decomposition Products	Not available.
Hazardous Polymerization	Will not occur.

Section 11. Toxicological Information

Toxicity to Animals	LD50: Not available. LC50: Not available.
Chronic Effects on Humans	Not available.
Other Toxic Effects on Humans	No specific information is available in our database regarding the other toxic effects of this material for humans.
Special Remarks on Toxicity to Animals	Not available.
Special Remarks on Chronic Effects on Humans	Not available.
Special Remarks on Other Toxic Effects on Humans	Not available.

Continued on Next Page

Section 12. Ecological Information

Ecotoxicity	Not available.
BOD5 and COD	Not available.
Biodegradable/OECD	Not available.
Mobility	Not available.
	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
Toxicity of the Products of Biodegradation	Not available.
Special Remarks on the Products of Biodegradation	Not available.

Section 13. Disposal Considerations

Waste Information	Waste must be disposed of in accordance with federal, state and local environmental control regulations.
Waste Stream	Not available.

Consult your local or regional authorities.

Section 14. Transport Information

DOT Classification	ORM-D - CONSUMER COMMODITY 
Marine Pollutant	Not a marine pollutant.
Hazardous Substances Reportable Quantity	Not available.
Special Provisions for Transport	Not available.
TDG Classification	Class 3: Flammable liquid.
ADR/RID Classification	Class 3: Flammable liquid A.
IMO/IMDG Classification	CLASS 3.3: Flammable liquid (High flashpoint group of liquids having a flashpoint of 23°C (73°F) up to, and including, 61°C (141°F) c.c.).
ICAO/IATA Classification	Class 3: Flammable liquid.

Continued on Next Page

Section 15. Regulatory Information

HCS Classification

Class: Combustible liquid having a flash point between 37.8°C (100°F) and 93.3°C (200°F).

U.S. Federal Regulations

TSCA 8(b) inventory: Water
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: No products were found.
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: No products were found.
SARA 313 toxic chemical notification and release reporting: No products were found.
Clean water act (CWA) 307: No products were found.
Clean water act (CWA) 311: No products were found.
Clean air act (CAA) 112 accidental release prevention: No products were found.
Clean air act (CAA) 112 regulated flammable substances: No products were found.
Clean air act (CAA) 112 regulated toxic substances: No products were found.

International Regulations

WHMIS (Canada) CLASS B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F).

No products were found.

EINECS Not available.

DSCL (EEC) R10- Flammable.

International Lists No products were found.

State Regulations

No products were found.

California prop. 65: No products were found.

Section 16. Other Information

Label Requirements FLAMMABLE.

Hazardous Material Information System (U.S.A.)

Health	1
Fire Hazard	2
Reactivity	0
Personal Protection	

National Fire Protection Association (U.S.A.)

References Not available.

Other Special Considerations Not available.

Validated by Technical Department on 2/4/2000.

Verified by Environmental Department.

Printed 2/4/2000.

Chemtrec
1-800-424-9300
1-202-483-7616

Notice to Reader

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Material Safety Data Sheet

Oxygen

Section 1. Chemical product and company identification

Product name : Oxygen

Supplier : AIRGAS INC., on behalf of its subsidiaries
259 North Radnor-Chester Road
Suite 100
Radnor, PA 19087-5283
1-610-687-5253

Product use : Synthetic/Analytical chemistry.

Synonym : Molecular oxygen; Oxygen molecule; Pure oxygen; O2; Liquid-oxygen-; UN 1072; UN 1073; Dioxygen; Oxygen USP, Aviator's Breathing Oxygen (ABO)

MSDS # : 001043

Date of Preparation/Revision : **6/16/2011.**

In case of emergency : 1-866-734-3438

Section 2. Hazards identification

Physical state : Gas.

Emergency overview : DANGER!

GAS:
OXIDIZER.
CONTACT WITH COMBUSTIBLE MATERIAL MAY CAUSE FIRE.
CONTENTS UNDER PRESURE.
Do not puncture or incinerate container.
May cause severe frostbite.
LIQUID:
OXIDIZER.
CONTACT WITH COMBUSTIBLE MATERIAL MAY CAUSE FIRE.
Extremely cold liquid and gas under pressure.
May cause severe frostbite.

Do not puncture or incinerate container. Store in tightly-closed container. Avoid contact with combustible materials.

Contact with rapidly expanding gases or liquids can cause frostbite.

Routes of entry : Inhalation

Potential acute health effects

Eyes : May cause eye irritation. Contact with rapidly expanding gas may cause burns or frostbite. Contact with cryogenic liquid can cause frostbite and cryogenic burns.

Skin : May cause skin irritation. Contact with rapidly expanding gas may cause burns or frostbite. Contact with cryogenic liquid can cause frostbite and cryogenic burns.

Inhalation : Respiratory system irritation after overexposure to high oxygen concentrations.

Ingestion : Ingestion is not a normal route of exposure for gases. Contact with cryogenic liquid can cause frostbite and cryogenic burns.

Medical conditions aggravated by over-exposure : Acute or chronic respiratory conditions may be aggravated by overexposure to this gas.

See toxicological information (Section 11)

Section 3. Composition, Information on Ingredients

Name	CAS number	% Volume	Exposure limits
Oxygen	7782-44-7	100	

Section 4. First aid measures

No action shall be taken involving any personal risk or without suitable training.If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus.It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

Skin contact : None expected.

Frostbite : Try to warm up the frozen tissues and seek medical attention.

Inhalation : If inhaled, remove to fresh air. If not breathing, give artificial respiration. Get medical attention.

Ingestion : As this product is a gas, refer to the inhalation section.

Section 5. Fire-fighting measures

Flammability of the product : Non-flammable.

Products of combustion : No specific data.

Fire hazards in the presence of various substances : Extremely flammable in the presence of the following materials or conditions: reducing materials, combustible materials and organic materials.

Fire-fighting media and instructions : Use an extinguishing agent suitable for the surrounding fire.

Apply water from a safe distance to cool container and protect surrounding area. If involved in fire, shut off flow immediately if it can be done without risk.

Contains gas under pressure. Contact with combustible material may cause fire. This material increases the risk of fire and may aid combustion. In a fire or if heated, a pressure increase will occur and the container may burst or explode.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions : Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment (section 8). Eliminate all ignition sources if safe to do so. Do not touch or walk through spilled material. Shut off gas supply if this can be done safely. Isolate area until gas has dispersed.

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Methods for cleaning up : Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Section 7. Handling and storage

Handling : High pressure gas. Do not puncture or incinerate container. Use equipment rated for cylinder pressure. Close valve after each use and when empty. Store in tightly-closed container. Avoid contact with combustible materials. Protect cylinders from physical damage; do not drag, roll, slide, or drop. Use a suitable hand truck for cylinder movement.

Never allow any unprotected part of the body to touch uninsulated pipes or vessels that contain cryogenic liquids. Prevent entrapment of liquid in closed systems or piping without pressure relief devices. Some materials may become brittle at low temperatures and will easily fracture.

Storage : Keep container tightly closed. Keep container in a cool, well-ventilated area. Separate from acids, alkalies, reducing agents and combustibles. Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Cylinder temperatures should not exceed 52 °C (125 °F).
For additional information concerning storage and handling refer to Compressed Gas Association pamphlets P-1 Safe Handling of Compressed Gases in Containers and P-12 Safe Handling of Cryogenic Liquids available from the Compressed Gas Association, Inc.

Section 8. Exposure controls/personal protection

Engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Personal protection

Eyes : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

When working with cryogenic liquids, wear a full face shield.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

The applicable standards are (US) 29 CFR 1910.134 and (Canada) Z94.4-93

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Insulated gloves suitable for low temperatures

Personal protection in case of a large spill : Self-contained breathing apparatus (SCBA) should be used to avoid inhalation of the product.

Product name

Oxygen

Consult local authorities for acceptable exposure limits.

Section 9. Physical and chemical properties

Molecular weight : 32 g/mole

Molecular formula : O2

Boiling/condensation point : -183°C (-297.4°F)

Melting/freezing point : -218.4°C (-361.1°F)

Critical temperature : -118.6°C (-181.5°F)

Vapor density : 1.105 (Air = 1) Liquid Density@BP: 71.23 lb/ft3 (1141 kg/m3)

Specific Volume (ft^3/lb) : 12.0482

Gas Density (lb/ft^3) : 0.083

Section 10. Stability and reactivity

Stability and reactivity : The product is stable.

Incompatibility with various substances : Extremely reactive or incompatible with the following materials: oxidizing materials, reducing materials and combustible materials.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11. Toxicological information

Toxicity data

Other toxic effects on humans : No specific information is available in our database regarding the other toxic effects of this material to humans.

Specific effects

Carcinogenic effects : No known significant effects or critical hazards.

Mutagenic effects : No known significant effects or critical hazards.

Reproduction toxicity : No known significant effects or critical hazards.

Section 12. Ecological information

Aquatic ecotoxicity

Not available.

Environmental fate : Not available.

Environmental hazards : This product shows a low bioaccumulation potential.

Toxicity to the environment : Not available.

Section 13. Disposal considerations

Product removed from the cylinder must be disposed of in accordance with appropriate Federal, State, local regulation.Return cylinders with residual product to Airgas, Inc.Do not dispose of locally.

Section 14. Transport information

Regulatory information	UN number	Proper shipping name	Class	Packing group	Label	Additional information
DOT Classification	UN1072 UN1073	OXYGEN, COMPRESSED Oxygen, refrigerated liquid	2.2	Not applicable (gas).	 	**Limited quantity** Yes. **Packaging instruction** **Passenger aircraft** Quantity limitation: 75 kg **Cargo aircraft** Quantity limitation: 150 kg **Special provisions** A52
TDG Classification	UN1072 UN1073	OXYGEN, COMPRESSED Oxygen, refrigerated liquid	2.2	Not applicable (gas).	 	**Explosive Limit and Limited Quantity Index** 0.125 **ERAP Index** 3000 **Passenger Carrying Ship**

						Index 50 **Passenger Carrying Road or Rail Index** 75 **Special provisions** 42
Mexico Classification	UN1072 UN1073	OXYGEN, COMPRESSED Oxygen, refrigerated liquid	2.2	Not applicable (gas).		-

"Refer to CFR 49 (or authority having jurisdiction) to determine the information required for shipment of the product."

Section 15. Regulatory information

United States

U.S. Federal regulations :

TSCA 8(a) IUR: Partial exemption
United States inventory (TSCA 8b): This material is listed or exempted.

SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: Oxygen
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Oxygen: Fire hazard, Sudden release of pressure, Delayed (chronic) health hazard

State regulations :

Connecticut Carcinogen Reporting: This material is not listed.
Connecticut Hazardous Material Survey: This material is not listed.
Florida substances: This material is not listed.
Illinois Chemical Safety Act: This material is not listed.
Illinois Toxic Substances Disclosure to Employee Act: This material is not listed.
Louisiana Reporting: This material is not listed.
Louisiana Spill: This material is not listed.
Massachusetts Spill: This material is not listed.
Massachusetts Substances: This material is listed.
Michigan Critical Material: This material is not listed.
Minnesota Hazardous Substances: This material is not listed.
New Jersey Hazardous Substances: This material is listed.
New Jersey Spill: This material is not listed.
New Jersey Toxic Catastrophe Prevention Act: This material is not listed.
New York Acutely Hazardous Substances: This material is not listed.
New York Toxic Chemical Release Reporting: This material is not listed.
Pennsylvania RTK Hazardous Substances: This material is listed.
Rhode Island Hazardous Substances: This material is not listed.

Canada

WHMIS (Canada) :

Class A: Compressed gas.
Class C: Oxidizing material.

CEPA Toxic substances: This material is not listed.
Canadian ARET: This material is not listed.
Canadian NPRI: This material is not listed.
Alberta Designated Substances: This material is not listed.
Ontario Designated Substances: This material is not listed.
Quebec Designated Substances: This material is not listed.

Section 16. Other information

United States

Label requirements : GAS:
OXIDIZER.
CONTACT WITH COMBUSTIBLE MATERIAL MAY CAUSE FIRE.
CONTENTS UNDER PRESURE.
Do not puncture or incinerate container.
May cause severe frostbite.
LIQUID:
OXIDIZER.
CONTACT WITH COMBUSTIBLE MATERIAL MAY CAUSE FIRE.
Extremely cold liquid and gas under pressure.
May cause severe frostbite.

Canada

Label requirements : Class A: Compressed gas.
Class C: Oxidizing material.

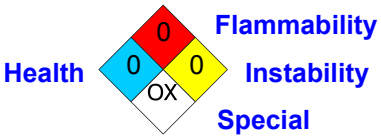
Hazardous Material Information System (U.S.A.) :

Health	0
Flammability	0
Physical hazards	0

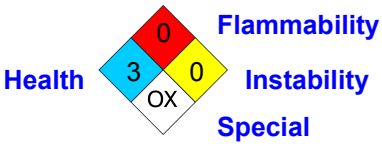
liquid:

Health	3
Fire hazard	0
Reactivity	0
Personal protection	

National Fire Protection Association (U.S.A.) :



liquid:



Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name: Painters Touch Aerosol Top Coats

Revision Date: 01/28/2008

Identification Number: 1925830, 1931830, 1941830, 1952830, 1961830, 1962830, 1965830, 1922830, 1926830, 1930830, 1933830, 1938830, 1945830, 1946830, 1949830, 1950830, 1953830, 1963830, 1964830, 1966830, 1974830, 1976830, 1977830, 1979830, 1982830, 1986830, 1992830, 1994830, 1995830, 1996830, 1924830, 1927830, 1934830, 1947830, 1948830, 1951830, 1971830, 1972830, 1973830, 1975830, 1990830, 1993830, 1970830, 225191, 224356, 224357, 224358, 224359, 240255, 240217, 240268, 239242, 239243, 239244, 239245, 240250, 240251, 240252, 240253, 240254, 240256, 240257, 240258, 240259, 240260, 240262, 240263, 240264, 240265, 240266, 240267, 240269, 240280, 240281, 240282, 240283, 240554, 244895

Product Use/Class: Topcoats/Aerosol

Supplier: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Manufacturer: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Preparer: Regulatory Department

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Acetone	67-64-1	40.0	500 PPM	750 PPM	750 PPM	N.E.
Liquefied Petroleum Gas	68476-86-8	35.0	1000 PPM	N.E.	1000 PPM	N.E.
Toluene	108-88-3	25.0	50 PPM	150 PPM	200 PPM	300 PPM
Aliphatic Petroleum Distillates	64742-48-9	20.0	400 PPM	N.E.	400 PPM	N.E.
Titanium Dioxide	13463-67-7	20.0	10 mg/m3	N.E.	10 mg/m3	N.E.
Xylene	1330-20-7	15.0	100 PPM	150 PPM	100 PPM	N.E.
Aromatic Solvent	64742-95-6	10.0	N.E.	N.E.	N.E.	N.E.
Naphtha	8032-32-4	10.0	300 PPM	N.E.	N.E.	N.E.
Stoddard Solvents	8052-41-3	10.0	100 PPM	N.E.	500 PPM	N.E.
Magnesium Silicate	14807-96-6	10.0	10 mg/m3	N.E.	15 mg/m3	N.E.
Ethylbenzene	100-41-4	5.0	100 PPM	125 PPM	100 PPM	N.E.
Aluminum Flake	7429-90-5	5.0	10 mg/m3	N.E.	15 mg/m3	N.E.
Aromatic Hydrocarbon	64742-95-6	5.0	N.E.	N.E.	N.E.	N.E.
Ethylene Glycol Monobutyl Ether	111-76-2	5.0	20 PPM	N.E.	50 PPM	N.E.
1,2,4-Trimethylbenzene	95-63-6	5.0	25 PPM	N.E.	N.E.	N.E.
Calcined Aluminum Silicate	1332-58-7	5.0	2 mg/m3	N.E.	5 mg/m3	N.E.
Pigment Red 122	980-26-7	5.0	15mg/m3	N.E.	5mg/m3	N.E.
Pigment Black 7	1333-86-4	5.0	3.5 mg/m3	N.E.	3.5 mg/m3	N.E.
Pigment Violet 32	12225-08-0	1.0	N.E.	N.E.	N.E.	N.E.

Section 3 - Hazards Identification

*** Emergency Overview ***: Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Vapors may cause flash fire or explosion. Contents Under Pressure. Extremely flammable liquid and vapor. Harmful if swallowed.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: May be harmful if absorbed through skin. Prolonged or repeated contact may cause skin irritation. Substance may cause slight skin irritation.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. Harmful if inhaled. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Avoid breathing vapors or mists.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: IARC lists Ethylbenzene as a possible human carcinogen (group 2B). Contains Titanium Dioxide. Titanium Dioxide is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of Titanium Dioxide in the formula.
May cause central nervous system disorder (e,g.,narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. Overexposure to toluene in laboratory animals has been associated with liver abnormalities, kidney, lung and spleen damage. Effects in humans have included liver and cardiac abnormalities. Contains carbon black. Chronic inflammation, lung fibrosis, and lung tumors have been observed in some rats experimentally exposed for long periods of time to excessive concentrations of carbon black and several insoluble fine dust particles. Tumors have not been observed in other animal species (i.e., mouse and hampster) under similar circumstances and study conditions. Epidemiological studies of North American workers show no evidence of clinically significant adverse health effects due to occupational exposure to carbon black.
Carbon black is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC and is proposed to be listed as A4- "not classified as a human carcinogen" by the American Conference of Govermental Industrial Hygienists. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of carbon black in the formula.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Hold eyelids apart and flush with plenty of water for at least 15 minutes. Get medical attention.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: -156 F
(Setaflash)

LOWER EXPLOSIVE LIMIT: 0.7 %
UPPER EXPLOSIVE LIMIT : 32.5 %

Extinguishing Media: Dry Chemical, Foam, Water Fog

Unusual Fire And Explosion Hazards: FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Perforation of the pressurized container may cause bursting of the can. Isolate from heat, electrical equipment, sparks and open flame. Water spray may be ineffective. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Keep containers tightly closed.

Special Firefighting Procedures: Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust.

Section 7 - Handling And Storage

Handling: Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Use only in a well-ventilated area. Wash hands before eating. Wash thoroughly after handling. Avoid breathing vapor or mist.

Storage: Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Contents under pressure. Do not expose to heat or store above 120 ° F. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Use explosion-proof ventilation equipment. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Respiratory Protection: A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection. A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Skin Protection: Nitrile or Neoprene gloves may afford adequate skin protection. Use impervious gloves to prevent skin contact and absorption of this material through the skin.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Boiling Range:	-34 - 999 F	Vapor Density:	Heavier than air
Odor:	Solvent Like	Odor Threshold:	ND
Appearance:	Liquid	Evaporation Rate:	Faster than Ether
Solubility in H2O:	Slight		
Freeze Point:	ND	Specific Gravity:	0.8110
Vapor Pressure:	ND	PH:	NE
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid temperatures above 120 ° F. Flammable hydrogen gas will evolve when product comes in contact with water or damp air. Heat will be generated. The amount of heat generated will depend upon the volume of material in contact. Avoid all possible sources of ignition.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Product LD50: ND

Product LC50: ND

Chemical Name	LD50	LC50
Acetone	N.D.	N.D.
Liquefied Petroleum Gas	N.D.	N.D.
Toluene	636 mg/kg (Oral, Rat)	49 gm/M3 (Inhalation, Rat)
Aliphatic Petroleum Distillates	N.D.	N.D.
Titanium Dioxide	>7500 mg/kg (ORAL, RAT)	N.D.
Xylene	4300, mg/kg (Oral Rat)	5000 ppm/4hr (Inhalation, Rat)
Aromatic Solvent	4700 mg/kg (ORAL, RAT)	3670 mg/kg (INH, RAT)
Naphtha	>5000 mg/kg (ORAL, RAT)	N.D.
Stoddard Solvents	N.D.	N.D.
Magnesium Silicate	N.D.	TCLo:11mg/m3 inh.
Ethylbenzene	3500 mg/kg (ORAL, RAT)	N.D.
Aluminum Flake	N.D.	N.D.
Aromatic Hydrocarbon	N.D.	N.D.
Ethylene Glycol Monobutyl Ether	1519 mg/kg (ORAL, MOUSE)	700 PPM (INH 7 Hr, RAT)
1,2,4-Trimethylbenzene	N.D.	18000 mg/m3 (RAT, 4 HR)

Calcined Aluminum Silicate	5000 mg/kg (ORAL RAT)	N.D.
Pigment Red 122	N.D.	N.D.
Pigment Black 7	>8000 mg/kg (ORAL, RAT)	N.D.
Pigment Violet 32	>10000 mg/kg (ORAL, RAT)	N.D.

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

DOT Proper Shipping Name:	Aerosols	Packing Group:	---
DOT Technical Name:	---	Hazard Subclass:	---
DOT Hazard Class:	2.1	Resp. Guide Page:	126
DOT UN/NA Number:	UN1950		

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number
Toluene	108-88-3
Xylene	1330-20-7
Ethylbenzene	100-41-4
Ethylene Glycol Monobutyl Ether	111-76-2
1,2,4-Trimethylbenzene	95-63-6

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

None known

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name	CAS Number
Modified Alkyd	PROPRIETARY

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name	CAS Number
Modified Alkyd	PROPRIETARY
Modified Alkyd	PROPRIETARY
Acrylic Copolymer	PROPRIETARY
Barium Sulfate	7727-43-7
Calcium Carbonate	1317-65-3
Yellow Iron Oxide	51274-00-1
Iron Oxide	1309-37-1

California Proposition 65:

WARNING! This product contains a chemical(s) known by the State of California to cause cancer.

WARNING! This product contains a chemical(s) known to the state of California to cause birth defects or other reproductive harm.

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: AB5, D2A, D2B

Section 16 - Other Information

HMIS Ratings:

Health: 2* Flammability: 4 Reactivity: 0 Personal Protection: X

VOLATILE ORGANIC COMPOUNDS, g/l: NA

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

The information contained on this MSDS has been checked and should be accurate. However, it is the responsibility of the user to comply with all Federal, State, and Local laws and regulations.

MATERIAL SAFETY DATA SHEET

This MSDS complies with OSHA'S Hazard Communication Standard 29 CFR 1910.1200 and OSHA Form 174

IDENTITY AND MANUFACTURER'S INFORMATION

NFPA Rating: Health-2; Flammability-3; Reactivity-0; Special--	**HMIS Rating:** Health-2; Flammability-3; Reactivity-0; Personal Protection-B
Manufactured For: **Aftermarket Auto Parts Alliance, Inc.** Address: 14351 Blanco Road Address: San Antonio, TX 78216-7723	**DOT Hazard Classification:** Flammable Liquid, 3 **Identity** (trade name as used on label)**:** **PARTS MASTER BRAKE & PARTS/PART #0734/1734/7345/73455**
Phone: 210-492-4868	**MSDS Number:** B00734 Revision- 10
Emergency Response Number: 1-800-255-3924 **NOTICE: JUDGMENT BASED ON INDIRECT TEST DATA**	Date Prepared: 06/07/05 Prepared By: IB Information Calls: (770)422-2071

SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

COMPONENTS-CHEMICAL NAMES AND COMMON NAMES (Hazardous Components 1% or greater; Carcinogens 0.1% or greater)	CAS Number	SARA III LIST	OSHA PEL (ppm)	ACGIH TLV (ppm)	Carcinogen Ref. Source **
HEPTANE	142-82-5	No	500	400	d
ALCOHOL: ONE OR BOTH OF THE FOLLOWING:					
ISOPROPANOL	67-63-0	No	400	400	d
ETHANOL	64-17-5	No	1000	1000	d

SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: 120-150ºF	**Specific Gravity** (H2O=1): 0.675
Vapor Pressure: PSIG @ 70°F (Aerosols): N/A	**Vapor Pressure** (Non-Aerosols)(mm Hg and Temperature): N/E
Vapor Density (Air = 1): <1	**Evaporation Rate** (butyl acetate = 1): <1
Solubility in Water: None	**Water Reactive:** No
Appearance and Odor: Clear liquid with alcohol odor.	

SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY as per USA FLAME PROJECTION TEST (aerosols) N/A	Auto Ignition Temperature N/E	Flammability Limits in Air by % in Volume: % LEL: N/E % UEL: N/E
FLASH POINT AND METHOD USED (non-aerosols): <0ºF **SPECIAL FIRE FIGHTING PROCEDURES:** Self-contained breathing apparatus.	**EXTINGUISHER MEDIA:** Foam, dry chemical, carbon dioxide.	
Unusual Fire & Explosion Hazards: Do not expose to temperatures above 130°F or the container may rupture.		

SECTION 4 - REACTIVITY HAZARD DATA

STABILITY [X] STABLE [ ] UNSTABLE	**HAZARDOUS POLYMERIZATION** [ ] WILL [X] WILL NOT OCCUR
Incompatibility (Mat. to avoid): Strong oxidizing agents.	**Conditions to Avoid:** Open flame, welding arcs, heat, sparks.
Hazardous Decomposition Products: Carbon dioxide, carbon monoxide.	

SECTION 5 - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: [X] INHALATION [ ] INGESTION [ ] SKIN ABSORPTION [ ] EYE [ ] NOT HAZARDOUS

ACUTE EFFECTS

Inhalation: Excessive inhalation of vapors can cause nasal & respiratory irritation, dizziness, w eakness, nausea, headache, possible unconsciousness or asphyxiation.

Eye Contact: Slight irritation.	**Skin Contact:** Slight irritation due to defatting of skin.

Ingestion: Possible chemical pneumonitis if aspirated into lungs.

CHRONIC EFFECTS: (Effects due to excessive exposure to the raw materials of this mixture) Excessive inhalation of solvent may cause respiratory and neurological effects.

Medical Conditions Generally Aggravated by Exposure: May aggravate existing eye, skin, or upper respiratory conditions.

EMERGENCY FIRST AID PROCEDURES

Eye Contact: Flush with water for 15 minutes. If irritated, seek medical attention.

Skin Contact: Wash with soap and water. If irritated, seek medical attention.

Inhalation: Remove to fresh air. Resuscitate if necessary. Get medical attention.

Ingestion: DO NOT INDUCE VOMITING. Drink two large glasses of water. Get immediate medical attention.

SECTION 6 - CONTROL AND PROTECTIVE MEASURES

Respiratory Protection (specify type): If vapor concentration exceeds TLV, use respirator approved by NIOSH approved for organic vapor.

Protective Gloves: Neoprene	**Eye Protection:** Safety glasses recommended.

Ventilation Requirements: Adequate ventilation to keep vapor concentration below TLV.

Other Protective Clothing & Equipment: None

Hygienic Work Practices: Wash with soap and water before handling food.

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken If Material Is Spilled Or Released: Extinguish all ignition sources. Use positive pressure fresh air mask. Dike area & pump to an intact container.

Waste Disposal Methods: Incinerate or landfill according to local, state or federal regulations.

Precautions To Be Taken In Handling & Storage: Store in a cool dry place away from heat and ignition sources.

Other Precautions &/or Special Hazards: KEEP OUT OF REACH OF CHILDREN.

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind.

** Chemical Listed as Carcinogen or Potential Carcinogen. [a] NTP [b] IARC Monograph [c] OSHA [d] Not Listed [e] Animal Data Only

Date: 15 October 2007
Supercedes: 15 November 2004

MATERIAL SAFETY DATA SHEET

IN CASE OF EMERGENCY CALL CHEMTREC AT 1-800-424-9300

1. PRODUCT IDENTIFICATION AND COMPANY IDENTIFICATION:

Product Name: **PURELL® INSTANT HAND SANITIZER**

Company Name & Address: GOJO Industries, Inc.
One GOJO Plaza, Suite 500
Akron, OH 44311

Emergency Phone: **1-800-424-9300 CHEMTREC**
Non-Emergency Phone: (330) 255-6000
MSDS Request Phone: (330) 255-6000 x8804

2. INFORMATION ON INGREDIENTS:

HAZARDOUS INGREDIENTS	CAS NUMBER	OSHA PEL	ACGIH TLV	% RANGE
Ethyl Alcohol	64-17-5	1000 ppm	1000 ppm	62
Isopropanol	67-63-0	400 ppm	400 ppm	<5

Other ingredient(s) with notification requirements:	CAS NUMBER	List
Ethyl Alcohol	64-17-5	MA 1; NJ 1S; PA 1; CN 2
Isopropanol	67-63-0	MA 1; NJ 1S; CN 1

3. HAZARDS IDENTIFICATION:

EMERGENCY OVERVIEW

When used according to instructions, the product applicable to this MSDS is safe and presents no immediate or long-term health hazard. However, abnormal entry routes, such as gross ingestion, may require immediate medical attention.

Potential Health Effects:

HMIS: Health 1 Flammability 3 Reactivity 0 Personal Protection None

Eye Contact: May cause eye irritation.
Skin Contact: No irritation or reaction expected.
Inhalation: Not applicable.
Ingestion: May cause upset stomach, nausea (Abnormal entry route).
Carcinogenicity: Not listed as a carcinogen by NTP, IARC, OSHA or ACGIH.

4. FIRST AID MEASURES:

Eye Contact: Do not rub eyes. Flush eyes thoroughly with water for 15 minutes. If condition worsens or irritation persists, contact physician.
Skin Contact: Not applicable.
Inhalation: Not applicable.
Ingestion: Do not induce vomiting. Contact a physician or Poison Control Center.

5. FIRE FIGHTING MEASURES:

NFPA:	Health 0 Fire 3 Reactivity 0
Flashpoint °F/°C (PMCC method):	86.36°F/30.2°C
Unusual Fire and Explosion Hazards:	Product is flammable due to alcohol content.
Special Fire Fighting Procedures:	None known.
Extinguishing Media:	X Water Fog X Alcohol Foam X CO_2 X Dry Chemical ____ Other

6. ACCIDENTAL RELEASE MEASURES:

Avoid contact with ignition sources since product is flammable. Absorb onto inert material and dispose in appropriate manner. Water clean up and rinse. CAUTION – WILL CAUSE SLIPPERY SURFACES.

7. HANDLING AND STORAGE:

Keep away from fire or flame. Store at normal room temperature away from reach of small children. Keep containers sealed. Use older containers first. Avoid freezing conditions.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

Eye Protection:	None required under normal conditions.
Skin Protection:	None required under normal conditions.
Respiratory Protection:	None required under normal conditions.
Ventilation:	None required under normal conditions.
Protective Equipment or Clothing:	None required under normal conditions.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance and Odor	Clear liquid, citrus fragrance
pH (undiluted):	4.5 – 9.5
VOC , %:	65

10. STABILITY AND REACTIVITY:

Stable/Non reactive product. Avoid ignition sources.

11. TOXICOLOGICAL INFORMATION:

No acute or chronic toxic effects expected when used according to directions.

12. ECOLOGICAL CONSIDERATIONS:

No ecological or special considerations when used according to directions. Not considered environmentally harmful from normal dilution, expected usage and typical drainage to sewers, septic systems and treatment plants.

13. DISPOSAL CONSIDERATIONS:

Characteristic hazardous waste-flammable liquid. Dispose according to local, state and Federal regulations.

14. TRANSPORT INFORMATION:

Hazardous by transport regulations. When transported by Ground and Rail, this product typically is shipped as Consumer Commodity ORM-D. When transported by air, this product is typically shipped as Consumer Commodity or Alcohols N.O.S. depending on package size. When transported by ocean, this product is typically shipped as Limited Quantities. Refer to current regulations for exact requirements.

15. REGULATORY AND OTHER INFORMATION:

TSCA: All ingredients are listed or exempt per reference 15 USC 2602 (2)(B)(iv).

Complies with current FDA regulations for cosmetic and/or over-the-counter drug products.

MATERIAL SAFETY DATA SHEET

RTA9215
07 00

DATE OF PREPARATION
Aug 25, 2012

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
RTA9215
PRODUCT NAME
RUST TOUGH® Rust Preventive Enamel (aerosol), Forest Green
MANUFACTURER'S NAME
Krylon Products Group
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	(800) 247-3268 www.krylon.com
Regulatory Information	(216) 566-2902
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
14	**74-98-6**	**Propane**		
		ACGIH TLV	2500 PPM	760 mm
		OSHA PEL	1000 PPM	
6	**106-97-8**	**Butane**		
		ACGIH TLV	800 PPM	760 mm
		OSHA PEL	800 PPM	
6	**64742-89-8**	**V. M. & P. Naphtha**		
		ACGIH TLV	300 PPM	12 mm
		OSHA PEL	300 PPM	
		OSHA PEL	400 PPM STEL	
16	**108-88-3**	**Toluene**		
		ACGIH TLV	20 PPM	22 mm
		OSHA PEL	100 ppm (Skin)	
		OSHA PEL	150 ppm (Skin) STEL	
0.2	**100-41-4**	**Ethylbenzene**		
		ACGIH TLV	20 PPM	7.1 mm
		OSHA PEL	100 PPM	
		OSHA PEL	125 PPM STEL	
1	**1330-20-7**	**Xylene**		
		ACGIH TLV	100 PPM	5.9 mm
		ACGIH TLV	150 PPM STEL	
		OSHA PEL	100 PPM	
		OSHA PEL	150 PPM STEL	
28	**67-64-1**	**Acetone**		
		ACGIH TLV	500 PPM	180 mm
		ACGIH TLV	750 PPM STEL	
		OSHA PEL	1000 PPM	
7	**107-87-9**	**Methyl n-Propyl Ketone**		
		ACGIH TLV	150 PPM STEL	27.8 mm
		OSHA PEL	200 PPM	
		OSHA PEL	250 PPM STEL	
0.4	**13463-67-7**	**Titanium Dioxide**		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	

SECTION 3 — HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.

HMIS Codes

Health	2*
Flammability	3
Reactivity	0

EFFECTS OF OVEREXPOSURE

EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.
Prolonged overexposure to hazardous ingredients in Section 2 may cause adverse chronic effects to the following organs or systems:

- the liver
- the urinary system
- the cardiovascular system
- the reproductive system

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.
Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	EXTINGUISHING MEDIA
Propellant < 0 °F	0.9	12.8	Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Containers may explode when exposed to extreme heat.
Application to hot surfaces requires special precautions.
During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.
Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.
Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

Not Available

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep away from heat, sparks, and open flame. Vapors will accumulate readily and may ignite explosively.
During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.
Consult NFPA Code. Use approved Bonding and Grounding procedures.
Contents under pressure. Do not puncture, incinerate, or expose to temperature above 120F. Heat from sunlight, radiators, stoves, hot water, and other heat sources could cause container to burst. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.
Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.
Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

None required for normal application of aerosol products where minimal skin contact is expected. For long or repeated contact, wear chemical resistant gloves.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PRECAUTIONS

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	6.53 lb/gal	782 g/l
SPECIFIC GRAVITY	0.79	
BOILING POINT	<0 - 325 °F	<-18 - 162 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	87%	
EVAPORATION RATE	Faster than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
pH	7.0	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

Volatile Weight 51.73% Less Water and Federally Exempt Solvents

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Ethylbenzene is classified by IARC as possibly carcinogenic to humans (2B) based on inadequate evidence in humans and sufficient evidence in laboratory animals. Lifetime inhalation exposure of rats and mice to high ethylbenzene concentrations resulted in increases in certain types of cancer, including kidney tumors in rats and lung and liver tumors in mice. These effects were not observed in animals exposed to lower concentrations. There is no evidence that ethylbenzene causes cancer in humans.

IARC's Monograph No. 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint."

TOXICOLOGY DATA

CAS No.	Ingredient Name			
74-98-6	**Propane**			
		LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
106-97-8	**Butane**			
		LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
64742-89-8	**V. M. & P. Naphtha**			
		LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
108-88-3	**Toluene**			
		LC50 RAT	4HR	4000 ppm
		LD50 RAT		5000 mg/kg
100-41-4	**Ethylbenzene**			
		LC50 RAT	4HR	Not Available
		LD50 RAT		3500 mg/kg
1330-20-7	**Xylene**			
		LC50 RAT	4HR	5000 ppm
		LD50 RAT		4300 mg/kg
67-64-1	**Acetone**			
		LC50 RAT	4HR	Not Available
		LD50 RAT		5800 mg/kg
107-87-9	**Methyl n-Propyl Ketone**			
		LC50 RAT	4HR	Not Available
		LD50 RAT		1600 mg/kg
13463-67-7	**Titanium Dioxide**			
		LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.
Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.
Do not incinerate. Depressurize container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

US Ground (DOT)

May be classed as LTD. QTY. OR ORM-D
UN1950, AEROSOLS, 2.1, LIMITED QUANTITY, (ERG#126)

Canada (TDG)

May be classed as LTD. QTY. OR ORM-D
UN1950, AEROSOLS, CLASS 2.1, LIMITED QUANTITY, (ERG#126)

IMO

May be shipped as Limited Quantity
UN1950, AEROSOLS, CLASS 2.1, LIMITED QUANTITY, EmS F-D, S-U, ADR (D)

IATA/ICAO

UN1950, AEROSOLS, FLAMMABLE, 2.1, LIMITED QUANTITY

SECTION 15 — REGULATORY INFORMATION

SARA 313 *(40 CFR 372.65C)* SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
108-88-3	Toluene	16	
100-41-4	Ethylbenzene	0.1	
1330-20-7	Xylene	1	

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name:	Rust-Oleum Professional High Performance Enamel Aerosol	Revision Date:	06/02/2006
Identification Number:	7524838, 7527838, 7533838, 7538838, 7543838, 7548838, 7555838, 7564838, 7565838, 7570838, 7578838, 7579838, 7581838, 7587838, 7590838, 7592838, 239107, 239108, 239109, 239110, 239111, 239112		
Product Use/Class:	Topcoats/Aerosol		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	Manufacturer:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Regulatory Department		

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Magnesium Silicate	14807-96-6	40.0	10 mg/m3	N.E.	15 mg/m3	N.E.
Acetone	67-64-1	30.0	500 PPM	750 PPM	750 PPM	N.E.
Liquefied Petroleum Gas	68476-86-8	30.0	1000 PPM	N.E.	1000 PPM	N.E.
Xylene	1330-20-7	25.0	100 PPM	150 PPM	100 PPM	N.E.
Alkyd Resin	NOT AVAILABLE	25.0	N.E.	N.E.	N.E.	N.E.
Titanium Dioxide	13463-67-7	15.0	10 mg/m3	N.E.	10 mg/m3	N.E.
N-Butyl Acetate	123-86-4	10.0	150 PPM	200 PPM	150 PPM	N.E.
Methyl Ethyl Ketone	78-93-3	10.0	200 PPM	300 PPM	200 PPM	N.E.
Ethylbenzene	100-41-4	10.0	100 PPM	125 PPM	100 PPM	N.E.
Toluene	108-88-3	5.0	50 PPM	150 PPM	200 PPM	300 PPM
Ethylene Glycol Monobutyl Ether	111-76-2	5.0	20 PPM	N.E.	50 PPM	N.E.
Pigment Black 7	1333-86-4	5.0	3.5 mg/m3	N.E.	3.5 mg/m3	N.E.
Stoddard Solvents	8052-41-3	5.0	100 PPM	N.E.	500 PPM	N.E.
Aromatic Hydrocarbon	64742-95-6	5.0	N.E.	N.E.	N.E.	N.E.
1,2,4-Trimethylbenzene	95-63-6	5.0	25 PPM	N.E.	N.E.	N.E.
Chlorite	14998-27-7	5.0	N.E.	N.E.	N.E.	N.E.
Pigment Yellow 17	4531-49-1	5.0	2 mg/m3	N.E.	5 mg/m3	N.E.

Section 3 - Hazards Identification

*** Emergency Overview ***: Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Vapors may cause flash fire or explosion. Extremely flammable liquid and vapor. Contents Under Pressure. Harmful if swallowed.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: May be harmful if absorbed through skin. Prolonged or repeated contact may cause skin irritation. Substance may cause slight skin irritation.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. Avoid breathing vapors or mists. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Harmful if inhaled.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: IARC lists Ethylbenzene as a possible human carcinogen (group 2B). May cause central nervous system disorder (e,g.,narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. Overexposure to toluene in laboratory animals has been associated with liver abnormalities, kidney, lung and spleen damage. Effects in humans have included liver and cardiac abnormalities. Overexposure to methyl ethyl ketone in laboratory animals has been associated with liver abnormalities, kidney and lung damage. Fetotoxic/embryotoxic effects from inhalation have been seen in rats exposed to >1000ppm during gestation.
Contains carbon black. Chronic inflammation, lung fibrosis, and lung tumors have been observed in some rats experimentally exposed for long periods of time to excessive concentrations of carbon black and several insoluble fine dust particles. Tumors have not been observed in other animal species (i.e., mouse and hampster) under similar circumstances and study conditions. Epidemiological studies of North American workers show no evidence of clinically significant adverse health effects due to occupational exposure to carbon black.
Carbon black is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC and is proposed to be listed as A4- "not classified as a human carcinogen" by the American Conference of Govermental Industrial Hygienists. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of carbon black in the formula.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Hold eyelids apart and flush with plenty of water for at least 15 minutes. Get medical attention.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: -156 F
(Setaflash)

LOWER EXPLOSIVE LIMIT: 0.7 %
UPPER EXPLOSIVE LIMIT : 32.5 %

Extinguishing Media: Dry Chemical, Foam, Water Fog

Unusual Fire And Explosion Hazards: FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Water spray may be ineffective. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Perforation of the

pressurized container may cause bursting of the can.

Special Firefighting Procedures: Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

Section 7 - Handling And Storage

Handling: Use only in a well-ventilated area. Avoid breathing vapor or mist. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Wash thoroughly after handling. Wash hands before eating.

Storage: Contents under pressure. Do not expose to heat or store above 120 ° F. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Use explosion-proof ventilation equipment.

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

Skin Protection: Nitrile or Neoprene gloves may afford adequate skin protection. Use impervious gloves to prevent skin contact and absorption of this material through the skin.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Boiling Range:	-34 - 900 F	Vapor Density:	Heavier than air
Odor:	Solvent Like	Odor Threshold:	ND
Appearance:	Liquid	Evaporation Rate:	Faster than Ether
Solubility in H2O:	Slight		

Freeze Point:	ND	Specific Gravity:	
Vapor Pressure:		PH:	NE
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid temperatures above 120 ° F. Avoid all possible sources of ignition.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Product LD50: ND

Product LC50: ND

Chemical Name	LD50	LC50
Magnesium Silicate	N.D.	TCLo:11mg/m3 inh.
Acetone	N.D.	N.D.
Liquefied Petroleum Gas	N.D.	N.D.
Xylene	N.D.	N.D.
Alkyd Resin	N.D.	N.D.
Titanium Dioxide	>7500 mg/kg (ORAL, RAT)	N.D.
N-Butyl Acetate	13100 mg/kg (ORAL, RAT)	2000 PPM (INH 4 Hr, RAT)
Methyl Ethyl Ketone	N.D.	N.D.
Ethylbenzene	3500 mg/kg (ORAL, RAT)	N.D.
Toluene	N.D.	N.D.
Ethylene Glycol Monobutyl Ether	1519 mg/kg (ORAL, MOUSE)	700 PPM (INH 7 Hr, RAT)
Pigment Black 7	>8000 mg/kg (ORAL, RAT)	N.D.
Stoddard Solvents	N.D.	N.D.
Aromatic Hydrocarbon	N.D.	N.D.
1,2,4-Trimethylbenzene	N.D.	18000 mg/m3 (RAT, 4 HR)
Chlorite	N.D.	N.D.
Pigment Yellow 17	N.D.	N.D.

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

DOT Proper Shipping Name:	Aerosol	Packing Group:	---
DOT Technical Name:	---	Hazard Subclass:	---
DOT Hazard Class:	2.1	Resp. Guide Page:	126
DOT UN/NA Number:	UN1950		

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number
Xylene	1330-20-7
Methyl Ethyl Ketone	78-93-3
Ethylbenzene	100-41-4
Toluene	108-88-3
Ethylene Glycol Monobutyl Ether	111-76-2
1,2,4-Trimethylbenzene	95-63-6

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

None known

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

none

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name	CAS Number
Alkyd Resin	MIXTURE

Calcium Carbonate	1317-65-3
Barium Sulfate	7727-43-7

California Proposition 65:

WARNING! This product contains a chemical(s) known by the State of California to cause cancer.

WARNING! This product contains a chemical(s) known to the state of California to cause birth defects or other reproductive harm.

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: AB5, D2A, D2B

Section 16 - Other Information

HMIS Ratings:

Health: 2* Flammability: 4 Reactivity: 0 Personal Protection: X

VOLATILE ORGANIC COMPOUNDS, g/l:

REASON FOR REVISION:

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

The information contained on this MSDS has been checked and should be accurate. However, it is the responsibility of the user to comply with all Federal, State, and Local laws and regulations.

520-35 SILATHANE BRIGHT YELLOW, 1235

MSDS Number

BXCVR

National Stock Number

8010-00N058341

Product Name

520-35 SILATHANE BRIGHT YELLOW, 1235

Manufacturer

BRUNING PAINT CO

Product Identification

Product ID:520-35 SILATHANE BRIGHT YELLOW, 1235
MSDS Date:01/01/1993
FSC:8010
NIIN:00N058341
MSDS Number: BXCVR

Responsible Party

BRUNING PAINT CO

601 S HAVEN ST

BALTIMORE , MD 21224

US

Emergency Phone: 410-342-3636;800-424-9300(CHEMTREC)

Info Phone: 410-342-3636

Cage: EO376

Contractor

KYANIZE PAINT

BALTIMORE, MD 21224

US

800-368-2076

Cage: 85520

Ingredients

TITANIUM OXIDE;(TITANIUM DIOXIDE)

CAS: 13463-67-7

RTECS: XR2275000

Fraction By Weight: 1.960%

OSHA PEL15 MG/M3 TDUST

ACGIH TLV: 10 MG/M3 TDUST

1.1.

CAS: 1330-20-7

RTECS: ZE2100000

Fraction By Weight: 20%

OSHA PEL100 PPM

ACGIH TLV: 100 PPM;150 STEL

EPA Report Quantity: 1000 LBS

DOT Report Quantity: 1000 LBS

1.0.

CAS: 8052-41-3

RTECS: WJ8925000

Fraction By Weight:

OSHA PEL500 PPM

ACGIH TLV: 100 PPM

1.2.

CAS: 108-88-3

RTECS: XS5250000

Fraction By Weight: 5%

OSHA PEL200 PPM; Z-2

ACGIH TLV: 50 PPM, S

EPA Report Quantity: 1000 LBS

DOT Report Quantity: 1000 LBS

2.6.

CAS: 67-64-1

RTECS: AL3150000

Fraction By Weight:

OSHA PEL1000 PPM

ACGIH TLV: 750 PPM; 1000 STEL

EPA Report Quantity: 5000 LBS

DOT Report Quantity: 5000 LBS

PROPIONIC ACID, 3-ETHOXY-, ETHYL ESTER;

CAS: 763-69-9

RTECS: UF3325000

Fraction By Weight:

OSHA PELN/K

ACGIH TLV: N/K

1.8.

CAS: 75-28-5

RTECS: TZ4300000

Fraction By Weight: 15%

OSHA PELN/K

ACGIH TLV: N/K

2.3.

CAS: 74-98-6

RTECS: TX2275000

OSHA PELN/K

ACGIH TLV: N/K

Hazards

LD50 LC50 Mixture:NONE SPECIFIED BY MANUFACTURER.
Routes of Entry: Inhalation:YES Skin:YES Ingestion:NO
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and Chronic:IN A CONFINED AREA VAPORS IN HIGH CONCENTRATION ARE ANESTHETIC. IRRIT TO SKIN & UPPER RESP SYSTEM. OVEREXP MAY RESULT IN LIGHT-HEADEDNESS, STAGGERING GAIT, GIDDINESS & POSSIBLE NAUSEA. CONTAINS PETROL EUM DISTILLATES - HARMFUL OR FATAL IF SWALLOWED. CHRONIC: REPORTS HAVE ASSOCIATED RPTD & PRLGD OVEREXP(EFTS OF OVEREXP)
Explanation of Carcinogenicity:NOT RELEVANT.
Effects of Overexposure:HLTH HAZ: TO SOLVENTS W/PERM BRAIN & NERVOUS SYSTEM DAMAGE, ALSO KIDNEY & LIVER DAMAGE. NOTE: TOLUENE APPEARS ON THE NAVY LISTING OF OCCUPATIONAL CHEMICAL REPRODUCTIVE HAZARDS. SEEK CONSULTATION FROM APPROPRIATE HEALTH PROFESSIONALS CONCERNING LATEST HAZARD LIST INFORMATION AND SAFE HANDLING AND EXPOSURE INFO.
Medical Cond Aggravated by Exposure:NONE ESTABLISHED.

First Aid

First Aid:INHAL: REMOVE PATIENT TO FRESH AIR. EYES: FLUSH WITH WATER FOR AT LEAST 15 MINUTES. SKIN: WASH WITH SOAP & WATER. INGEST: CALL MD IMMEDIATELY. DO NOT INDUCE VOMITING.

Fire Fighting

Flash Point Method:TOC
Flash Point:Lower Limits:SEE INGS
Extinguishing Media:CARBON DIOXIDE, DRY CHEMICAL OR FOAM.
Fire Fighting Procedures:WEAR NIOSH/MSHA APPROVED SCBA & FULL PROTECTIVE EQUIPMENT. WATER MAY BE INEFFECTIVE - WATER MAY BE USED TO KEEP FIRE EXPOSED CONTAINERS COOL.
Unusual Fire/Explosion Hazard:DO NOT SPRAY NEAR OPEN FLAME. KEEP AT ROOM TEMPERATURE AS EXPOSURE TO DIRECT SUNLIGHT OR OTHER HEAT MAY CAUSE BURSTING.

Accidental Release

Spill Release Procedures:REMOVE ALL SOURCES OF IGNITION. VENTILATE. AVOID BREATHING VAPORS AND REMOVE WITH INERT ABSORBENT.
Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

Handling

Handling and Storage Precautions:DO NOT STORE ABOVE 120F. KEEP AT ROOM TEMPERATURE AS EXPOSURE TO DIRECT SUNLIGHT OR HEAT MAY CAUSE BURSTING.
Other Precautions:KEEP AWAY FROM CHILDREN. DO NOT PUNCTURE OR INCINERATE. DO NOT SPRAY NEAR FIRE OR OPEN FLAME.

Exposure Controls

Respiratory Protection:AVOID BREATHING OV VAPOR OR SPRAY MIST. USE NIOSH/MSHA APPROVED RESPIRATOR APPROPRIATE FOR EXPOSURE OF CONCERN.
Ventilation:PROVIDE LOCAL EXHST VENT IN VOL & PATTERN TO KEEP TLV OF ALL HAZ INGS BELOW ACCEPTABLE LIMIT & LEL BELOW STATED LIMIT.
Protective Gloves:IMPERVIOUS GLOVES.
Eye Protection:ANSI APPRVD CHEM WORKERS GOGGS.
Other Protective Equipment:EMERGENCY EYEWASH & DELUGE SHOWER MEETING ANSI DESIGN CRITERIA.
Work Hygienic Practices:NONE SPECIFIED BY MANUFACTURER.
Supplemental Safety and Health

NONE SPECIFIED BY MANUFACTURER.

Chemical Properties

Boiling Pt:B.P. Text:Vapor Density:HVR/AIR
Evaporation Rate & Reference:FASTER/ETHER(PROPELLANTS)
Appearance and Odor:COATINGS.
Percent Volatiles by Volume:84(WT)

Stability

Stability Indicator/Materials to Avoid:YES
NONE.
Stability Condition to Avoid:DO NOT STORE ABOVE 120F.
Hazardous Decomposition Products:BY OPEN FLAME: CARBON MONOXIDE, CARBON DIOXIDE.

Disposal

Waste Disposal Methods:DO NOT INCINERATE - DISPOSE IN ACCORDANCE W/LOCAL, STATE & FEDERAL REGULATIONS.

1294 SILATHANE SEMI-GLOSS RED BASE

MSDS Number

BYMMN

National Stock Number

8010-00F046052

Product Name

1294 SILATHANE SEMI-GLOSS RED BASE

Manufacturer

BRUNING PAINT CO INC

Product Identification

Product ID:1294 SILATHANE SEMI-GLOSS RED BASE
MSDS Date:10/11/1989
FSC:8010
NIIN:00F046052
MSDS Number: BYMMN

Responsible Party

BRUNING PAINT CO INC

601 S HAVEN ST

BALTIMORE , MD 21224-4347

US

Emergency Phone: 410-342-3636/3641

Info Phone: 410-342-3636/3641

Cage: EO376

Contractor

KYANIZE PAINT

BALTIMORE, MD 21224

US

800-368-2076

Cage: 85520

Ingredients

V M & P NAPHTHA, LIGROINE, MINERAL SPIRITS

CAS: 8032-32-4

RTECS: OI6180000

Fraction By Weight: 35-50%

ACGIH TLV: 300 PPM

TALC (POWDER), (ASBESTOS FREE), TALCUM; HYDROUS MAGNESIUM

CAS: 14807-96-6

RTECS: WW2710000

Fraction By Weight: 5-7.5%

OSHA PEL2 MG/CUM (RESP DUST)

ACGIH TLV: 2 MG/CUM (RESP DUST)

3.596 LBS/GAL

RTECS: 9999999VO

Hazards

Routes of Entry: Inhalation:YES Skin:NO Ingestion:NO
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and Chronic:MINERAL SPIRITS-INHALATION: MAY CAUSE NOSE, THROAT & MUCOUS MEMBRANE IRRITANT. CNS DEPRESSANT. EYES: IRRITATION. REPEATED/PROLONGED OVEREXPOSURE TO SOLVENTS MAY CAUSE PERMANENT BRAIN & NERVOUS SYSTEM DAMAGE.
Explanation of Carcinogenicity:NONE
Effects of Overexposure:IRRITATION, DIZZINESS, HEADACHE, INTOXICATION W/EUPHORIA, UNCONSCIOUSNESS.

First Aid

First Aid:EYES: FLUSH W/LUKE WARM WATER FOR 15 MINS. SKIN: FLUSH WASH W/COPIOUS AMOUNTS OF LUKE WARM WATER. INHALATION: REMOVE TO FRESH AIR. RESTORE BREATHING IF REQUIRED. INGESTION: RINSE MOUTH IMMEDIATELY. GI VE 6-8 OUNCES OF LIQUID. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. DON'T INDUCE VOMITING UNLESS ADVISED BY A PHYSICIAN. OBTAIN MEDICAL ATTENTION IN ALL CASES.

Fire Fighting

Flash Point Method:TCC
Flash Point:104F
Lower Limits:0.9
Upper Limits:7
Extinguishing Media:WATER SPRAY, WATER, FOG NOZZLES, NFPA CLASS B EXTINGUISHERS.
Fire Fighting Procedures:WATER SPRAY MAY BE INNEFECTIVE. WATER MAY BE USED TO COOL CLOSED CONTAINERS. IF WATER IS USED, FOG NOZZLES ARE PREFERABLE.
Unusual Fire/Explosion Hazard:COMBUSTIBLE LIQUID. CLOSED CONTAINERS MAY EXPLODE WHEN EXPOSED TO EXTREME HEAT. NEVER USE WELDING/CUTTING TORCH ON/NEAR CONTAINER PRODUCT MAY IGNITE EXPLOSIVELY

Accidental Release

Spill Release Procedures:STOP &/CONTAIN DISCHARGE SAFELY. KEEP SOURCES OF IGNITION AWAY. VENTILATE AREA. USE NON-SPARKING TOOLS FOR CLEANUP. COVER W/INERT MATERIAL TO REDUCE FUMES. KEEP OUT OF DRAINS, SEWERS/WATERWAYS. CONTAC T FIRE AUTHORITIES & LOCAL HEALTH CONTROL AGENCIES

Handling

Handling and Storage Precautions:KEEP PRODUCT CONTAINERS COOL, DRY & AWAY FROM SOURCES OF IGNITION. USE & STORE PRODUCT W/ADEQUATE VENTILATION. DON'T SMOKE IN STORAGE AREAS.
Other Precautions:GROUND CONTAINERS WHEN POURING & LIMIT FREE FALL TO A FEW INCHES TO PREVENT STATIC SPARKS. AVOID SPONTANEOUS COMBUSTION OF CONTAMINATED RAGS/OTHER IGNITABLE ORGANIC MATERIALS. EMPTIED CONTAINERS MAY R ETAIN HAZARDOUS PROPERTIES. (SEE SUPP)

Exposure Controls

Respiratory Protection:IN OUTDOOR/OPEN AREAS USE A NIOSH/MSHA APPROVED MECHANICAL FILTER RESPIRATOR. IN RESTRICTED AREAS, USE NIOSH/MSHA APPROVED CHEMICAL-MECHANICAL FILTERS. IN CONFINED AREAS, USE NIOSH/MSHA APPROVED AIR L INE TYPE RESPIRATOR/HOODS.
Ventilation:GENERAL DILUTION/LOCAL EXHAUST TO KEEP TLV < ACCEPTABLE LIMIT.
Protective Gloves:NATURAL RUBBER/NEOPRENE/BUNA N/NITRILE.
Eye Protection:GOGGLES
Other Protective Equipment:APRON.
Work Hygienic Practices:REMOVE/LAUNDER CONTAMINATED CLOTHING BEFORE REUSE.
Supplemental Safety and Health
DON'T CUT/PUNCTURE/WELD NEAR CONTAINER. KEEP CONTAINERS TIGHTLY CLOSED

WHEN NOT IN USE. DON'T BREATHE VAPORS/SPRAY MIST. INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING & INHALATING THE CONTENTS MAY BE HARMFUL/FATAL. PRODUCT CONTAINS PIGMENTS WHICH MAY BECOME A DUST NUISANCE BY ABRASIVE BLASTING/SANDING/GRINDING.

Chemical Properties

Boiling Pt:B.P. Text:300-388F
Vapor Pres:2
Vapor Density:>1
Evaporation Rate & Reference:SLOWER THAN BU AC
Percent Volatiles by Volume:55.28

Stability

Stability Indicator/Materials to Avoid:YES
INCOMPATIBLE W/STRONG ACIDS.
Stability Condition to Avoid:SPARKS, OPEN FLAME, HOT SURFACES & OTHER SOURCES OF HEAT & IGNITION.
Hazardous Decomposition Products:CO, CO2, OXIDES OF NITROGEN.

Disposal

Waste Disposal Methods:DON'T FLUSH TO SEWER, WATERSHED/WATERWAY. DISPOSE OF IAW/FEDERAL, STATE & LOCAL REGULATIONS. DON'T INCINERATE CLOSED CONTAINERS.

MATERIAL SAFETY DATA SHEET
SNOOP® Revised: January 2003

1. PRODUCT IDENTIFICATION

SNOOP®: Liquid leak detector for use on external surfaces only. Optimum usage temperatures are between 27°F and 200°F (-3°C and 93°C).

Manufactured by:
Swagelok Company
318 Bishop Road
Highland Hts., OH 44143
Tel: (440) 473-1050
Fax: (440) 473-0402

Emergency Contact:
Chemtrec (800) 424-9300

2. INGREDIENTS

Ingredients	CAS #	WT%	PEL
Water	7732-18-5	>95	Not Available
Surfactant	Not Available	<5	Not Available

3. HEALTH HAZARD INFORMATION

- European Community Danger Group ..... None.
- Special Hazards for man or environment ..... None.
- LC_{50}/LD_{50} ..... Not available.

Routes of Entry

Skin Contact	Skin Absorption	Eye Contact	Inhalation	Ingestion
No	**No**	**Yes**	**No**	**Yes**

4. FIRST AID MEASURES

- If inhaled (Overexposure): Unlikely to be inhaled.
- After contact with skin (Overexposure): Wash thoroughly with soap and water. If severe irritation develops, seek medical attention.
- After contact with eyes: Rinse thoroughly with water for 15 minutes, seek medical attention. Do not rub eyes.
- If swallowed: Unlikely to cause illness, seek medical attention if needed.
- Medical information: None known.

5. FIRE FIGHTING MEASURES

- Suitable extinguishing agents: Not applicable.
- Unsuitable extinguishing agents: None known.
- Special dangers caused by substance or preparation itself, by combustion products, or gases formed: None known.
- Additional information: None.

Autoignition	UEL	LEL	Sensitivities
Not Applicable	Not Applicable	Not Applicable	Not Available

6. ACCIDENTAL RELEASE MEASURES

- Measures for protection of people: Eye and hand protection as needed to minimize excessive exposure.
- Measures for protection of the environment: None required.
- Cleaning measures: Use absorbent material to clean spills.
- Additional information: None.

7. HANDLING AND STORAGE

- Safety information: None.
- Information on protection from fire or explosion: None.
- Additional information: Store in a cool, dry place for optimal product performance.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

- Precautionary measures to protect employees: None required.
- Respiratory protection: None required.
- Hand protection: Rubber gloves are recommended to minimize exposure.
- Eye protection: Goggles are recommended when SNOOP® could splash in eyes.
- Skin protection: Wash hands after use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Odor	pH	Density	Vapor Pressure
Colorless liquid	Neutral	6.75 +/- 0.75	1.0 gm/cm^3	Not Available
Boiling Point	**Melting Point**	**Flash Point**	**Flammability**	**Explosive**
212°F/100°C	Not Available	Not Available	Not Available	Not Available

10. STABILITY AND REACTIVITY

- Conditions to avoid: None.
- Materials to avoid: Strong oxidizers, alkali metals, and compounds that react exothermically with water.
- Hazardous decomposition products: None.

11. TOXICOLOGICAL INFORMATION

- Acute toxic properties: None known.
- Health effects: None known.
- Additional health effects: None known.

Sensitization	Teratogenicity	Reproductive Toxicity	Mutagenicity	Synergistic Products	Carcinogenicity
Not Available	Not Available	Not Available	Not Available	Not Available	Listed ingredients are not suspected carcinogens according to NTP, IARC, and OSHA

12. ECOLOGICAL INFORMATION

- Mobility: Comparable to water.
- Degradability: Not established.
- Accumulation: No adverse bioaccumulation or biomagnification effects known.
- Short/Long term effects on ecotoxicity: No known ecological affects.

13. DISPOSAL CONSIDERATIONS

- Appropriate methods of disposal: Unused product not considered a hazardous waste in the United States. Dispose of in a responsible manner.
- European Community (EC) considerations: Use appropriate waste codes based on ingredients.

14. TRANSPORT INFORMATION

- Transport precautions: Consult applicable regulations when transporting this product.
- Additional information: None.

15. REGULATORY INFORMATION

- EC regulations: This product has been classified under CHIP-96 guidelines based on chemical content.
- US/Canadian regulation listing: SARA 313 - NO, Canada's Controlled Products - NO, TSCA - YES
- EC Relevant risk: None.
- EC Relevant safety: S: 37/39 - Wear suitable gloves and eye/face protection.
  S: 20 - When using do not eat or drink.
- Additional information: Consult country codes for specific requirements.

16. OTHER INFORMATION

- For further information contact: Your Swagelok Distributor or the contacts listed in Section 1 of this sheet.
- Sources of information used to compile document: Properties of individual ingredients were used to compile this document. This Material Safety Data Sheet was designed to give the distributors and users of SNOOP® information to handle and use the product in a responsible manner.

Preparation Data		
Environmental and Safety Department	(440) 349-5955	January 2003

Material Safety Data Sheet

MSDS ID NO.: 0130SPE012
Revision date: 05/25/2011

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product name: Speedway Dexron III/Mercon Automatic Transmission Fluid
Synonym: Dexron-III/Mercon Automatic Transmission Fluid, Speedway; Speedway Dexron ATF; Speedway Mercon ATF
Chemical Family: Motor/Lube Oil
Formula: Mixture

Manufacturer:
Marathon Petroleum Company LP
539 South Main Street
Findlay OH 45840

Other information: 419-421-3070
Emergency telephone number: 877-627-5463

2. COMPOSITION / INFORMATION ON INGREDIENTS

Lube oil is a complex mixture of highly refined lubricating base stocks and additives.

Product information:

Name	CAS Number	Weight %	ACGIH Exposure Limits:	OSHA - Vacated PELs - Time Weighted Ave	Other:
Speedway Dexron III/Mercon ATF	Mixture	100			

Component Information:

Name	CAS Number	Weight %	ACGIH Exposure Limits:	OSHA - Vacated PELs - Time Weighted Ave	Other:
Solvent Refined, Hydrotreated Heavy Paraffinic Distillate	64742-54-7	93-95			Mineral Oil Mist (MOM) =5 mg/m^3 TWA = 10 mg/m^3 STEL
Additives	Not specified	5-7			

Notes: The manufacturer has voluntarily elected to reflect exposure limits contained in OSHA's 1989 air contaminants standard in its MSDS's, even though certain of those exposure limits were vacated in 1992.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

THIS LUBRICANT IS A NON-VOLATILE AND NON-COMBUSTIBLE, AMBER COLORED LIQUID, BUT WILL IGNITE AND BURN AT ELEVATED TEMPERATURES.

Inhalation:

No acute effects expected from routine operations. Overheating of product may produce vapors which can cause respiratory irritation, dizziness and nausea.

Ingestion:

Product has a low order of acute toxicity. This is based on data from components or similar products.

Skin contact:

Prolonged or repeated liquid contact can cause dermatitis, folliculitis or oil acne.

Eye contact:

Liquid or vapor contact may result in slight eye irritation.

Carcinogenic Evaluation:

Product information:

Name	IARC Carcinogens:	NTP Carcinogens:	ACGIH - Carcinogens:	OSHA - Select Carcinogens:
Speedway Dexron III/Mercon ATF Mixture	NE			

Notes: The International Agency for Research on Cancer (IARC) has determined that there is no evidence that severely solvent-refined oils are carcinogenic to experimental animals.

Component Information:

Name	IARC Carcinogens:	NTP Carcinogens:	ACGIH - Carcinogens:	OSHA - Select Carcinogens:
Solvent Refined, Hydrotreated Heavy Paraffinic Distillate 64742-54-7	Supplement 7 [1987], Monograph 33 [1984]			Present

4. FIRST AID MEASURES

Eye Contact:

Flush eyes with large amounts of tepid water for at least 15 minutes. If symptoms or irritation occur, call a physician.

Skin Contact:

Wash with soap and large amounts of water. Remove contaminated clothing. If symptoms or irritation occur, call a physician.

If product is accidentally injected into or under the skin, regardless of wound size or initial absence of symptoms, the individual should be evaluated immediately by a physician as a surgical emergency.

Ingestion:

Not expected to be acutely toxic. If large amounts are swallowed, immediately call a physician.

Inhalation:

If affected, move person to fresh air. If breathing is difficult, administer oxygen. If not breathing or if no heartbeat, give artificial respiration or cardiopulmonary resuscitation (CPR). Immediately call a physician. If symptoms or irritation occur with any exposure, call a physician.

NOTES TO PHYSICIAN:

No data available.

Medical Conditions Aggravated By Exposure:

Skin contact could aggravate an existing skin disorder or dermatitis condition.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media:	For small fires, Class B fire extinguishing media such as CO2, dry chemical, foam (AFFF/ATC) or water spray can be used. For large fires, water spray, fog or foam (AFFF/ATC) can be used. Fire fighting should be attempted only by those who are adequately trained and equipped with proper protective equipment.
Specific hazards:	This material is not combustible per the OSHA Hazard Communication Standard, but will ignite and burn at elevated temperatures.
Special protective equipment for firefighters:	Avoid using straight water streams. Water spray and foam (AFFF/ATC) must be applied carefully to avoid frothing and from as far a distance as possible. Avoid excessive water spray application. Use water spray to cool exposed surfaces from as far a distance as possible. Keep run-off water out of sewers and water sources.
Flash point:	400 F, 204.4 C (COC)
Autoignition temperature:	No data available.
Flammable limits in air - lower (%):	No data available.
Flammable limits in air - upper (%):	No data available.

NFPA rating:
Health: 1
Flammability: 1
Instability: 0
Other: -

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Keep public away. Isolate and evacuate area. Shut off source if safe to do so. Advise authorities and National Response Center (800-424-8802) if the product has entered a water course or sewer. Advise local and state emergency services agencies, if appropriate. Contain liquid with sand or soil. Recover and return free product to proper containers. Use suitable absorbent materials such as vermiculite, sand, or clay to clean up residual liquids.

7. HANDLING AND STORAGE

Handling:

Comply with all applicable EPA, OSHA, NFPA and consistent state and local requirements. Use appropriate grounding and bonding practices. Store in properly closed containers that are appropriately labeled and in a cool well-ventilated area. Do not cut, drill, grind or weld on empty containers since they may contain explosive residues. Do not pressurize or expose to heat, open flames, strong oxidizers or other sources of ignition.

Avoid repeated and prolonged skin contact. Exercise good personal hygiene including removal of soiled clothing and prompt washing with soap and water.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT

Engineering measures: Local or general exhaust required when using at elevated temperatures that generate vapors or mists.

Respiratory protection: Not required under normal conditions and adequate ventilation. Approved organic vapor chemical cartridge or supplied air respirators should be worn when significant vapors are generated. Observe respirator assigned protection factors (APFs) criteria cited in federal OSHA 1910.134. Self-contained breathing apparatus should be used for fire fighting.

Skin and body protection: Use chemical resistant gloves such as neoprene, nitrile, or PVA to prevent prolonged or repeated skin contact.

Eye protection: No special eye protection is normally required.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance:	Amber Liquid
Physical state (Solid/Liquid/Gas):	Liquid
Substance type (Pure/Mixture):	Mixture
Color:	Amber
Odor:	Hydrocarbon
Molecular weight:	Not determined.
pH:	Neutral
Boiling point/range (5-95%):	686-966 F

9. PHYSICAL AND CHEMICAL PROPERTIES:

Melting point/range:	Not determined.
Decomposition temperature:	Not applicable.
Specific gravity:	0.880 @ 60 F
Density:	7.32 lbs/gal @ 60 F
Bulk density:	No data available.
Vapor density:	No data available.
Vapor pressure:	<1 mm Hg @ 100 F
Evaporation rate:	No data available.
Solubility:	<1%
Solubility in other solvents:	No data available.
Partition coefficient (n-octanol/water):	>4.9
VOC content(%):	No data available.
Viscosity:	60.0 cSt @ 40 C 9.5 cSt @ 100 C

10. STABILITY AND REACTIVITY

Stability: The material is stable at 70 F, 760 mm pressure.

Polymerization: Will not occur.

Hazardous decomposition products: Carbon monoxide, carbon dioxide, hydrogen sulfide, oxides of sulfur, oxides of nitrogen, oxides of zinc, aldehydes and hydrocarbons., Thermal decomposition may produce hydrogen sulfide and other sulfur-containing gases at temperatures greater than 150 F.

Materials to avoid: Strong oxidizers such as nitrates, chlorates, peroxides.

Conditions to avoid: Heat and open flames.

11. TOXICOLOGICAL INFORMATION

Acute toxicity:

Product information:

Name	CAS Number	Inhalation:	Dermal:	Oral:
Speedway Dexron III/Mercon ATF	Mixture	LD50 = 2.18 to > 4 mg/l [Rat]	LD50 > 2 gm/kg [Rabbit]	LD50 > 5 ml/kg [Rat]

Toxicology Information:

Based on data from components this product is considered to have a low order of acute oral and dermal toxicity. Chronic skin painting studies with severely solvent refined neutral oils did not produce evidence of skin cancer in mice.

This product contains approximately 0-1.5% of a zinc alkyl dithiophosphate (ZDDP) additive. ZDDP has been found to have weak mutagenic activity in cultured cells. Repeated dermal exposures of ZDDP produced severe skin irritation, significant weight loss and testicular atrophy in male rabbits but not male rats at high concentrations. Subsequent research showed that the testicular effect was due to the severe stress and weight loss as seen with other caustic materials and not a direct effect of ZDDP. The concentration of ZDDP in this product is significantly lower than exposure levels that produced these effects in rabbits.

12. ECOTOXICOLOGICAL INFORMATION

Mobility:

No data available.

Ecotoxicity:

No data available.

Bioaccummulation:

No data available.

Persistance/Biodegradation:

Water accomated fractions (WAF) of highly refined base oils did not produce acute toxicity in fish (100-1000 mg/l), fresh water algae (500 mg/l) or daphnia (10,000 mg/l) in 48-96 hour LC50 studies.

Used motor and/or lube oils can be toxic to birds and fish.

13. DISPOSAL CONSIDERATIONS

Cleanup Considerations:

This material as supplied and by itself, when discarded or disposed of, is not an EPA RCRA hazardous waste according to federal regulations. This material could become a hazardous waste if mixed or contaminated with a hazardous waste or other substance(s). It is the responsibility of the user to determine if disposal material is hazardous according to federal, state and local regulations.

Don't pollute. Conserve resources. Send used product to recycling center. Dispose of cleanup materials in accordance with applicable local, state and federal regulations.

14. TRANSPORT INFORMATION

49 CFR 172.101:

DOT:

Transport Information: This material when transported via US commerce is NOT REGULATED by DOT regulations.

Packing group: Not applicable.

DOT reportable quantity (lbs): Not applicable.

15. REGULATORY INFORMATION

US Federal Regulatory Information:

US TSCA Chemical Inventory Section 8(b): This product and/or its components are listed on the TSCA Chemical Inventory.

OSHA Hazard Communication Standard: This product has been evaluated and determined not to be hazardous as defined in OSHA's Hazard Communication Standard.

EPA Superfund Amendment & Reauthorization Act (SARA):

SARA Section 302: This product contains the following component(s) that have been listed on EPA's Extremely Hazardous Substance (EHS) List:

Name	CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs
Solvent Refined, Hydrotreated Heavy Paraffinic Distillate	NA
Additives	NA

SARA Section 304: This product contains the following component(s) identified either as an EHS or a CERCLA Hazardous substance which in case of a spill or release may be subject to SARA reporting requirements:

Name	CERCLA/SARA - Hazardous Substances and their Reportable Quantities
Solvent Refined, Hydrotreated Heavy Paraffinic Distillate	NA
Additives	NA

SARA Section 311/312 The following EPA hazard categories apply to this product:

None

SARA Section 313: This product contains the following component(s) that may be subject to reporting on the Toxic Release Inventory (TRI) From R:

Name	CERCLA/SARA 313 Emission reporting:
Solvent Refined, Hydrotreated Heavy Paraffinic Distillate	None
Additives	None

State and Community Right-To-Know Regulations:
The following component(s) of this material are identified on the regulatory lists below:

Solvent Refined, Hydrotreated Heavy Paraffinic Distillate

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	Not Listed.
Pennsylvania Right-To-Know:	Not Listed.
Massachusetts Right-To Know:	Not Listed.
Florida substance List:	Not Listed.
Rhode Island Right-To-Know:	Not Listed
Michigan critical materials register list:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	carcinogen

Solvent Refined, Hydrotreated Heavy Paraffinic Distillate	
New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed
Additives	
Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	Not Listed.
Pennsylvania Right-To-Know:	Not Listed.
Massachusetts Right-To Know:	Not Listed.
Florida substance List:	Not Listed.
Rhode Island Right-To-Know:	Not Listed
Michigan critical materials register list:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Not Listed
New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed

Canadian Regulatory Information:

Canada DSL/NDSL Inventory:	This product and/or its components are listed either on the Domestic Substances List (DSL) or are exempt.
NOTE:	Not Applicable.

16. OTHER INFORMATION

Additional Information: No data available.

Prepared by: Mark S. Swanson, Manager, Toxicology and Product Safety

The information and recommendations contained herein are based upon tests believed to be reliable. However, Speedway LLC does not guarantee their accuracy or completeness nor shall any of this information constitute a warranty, whether expressed or implied, as to the safety of goods, the merchantability of the goods, or the fitness of the goods for a particular purpose. Adjustment to conform to actual conditions of usage maybe required. Speedway assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied.

End of Safety Data Sheet

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name:	STRUST +SSPR 6PK GLOSS WHITE	Revision Date:	09/30/2011
Identification Number:	7792830		
Product Use/Class:	Topcoat/Aerosols		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	Manufacturer:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Regulatory Department		

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL CEILING
Liquefied Petroleum Gas	68476-86-8	30.0	N.E.	N.E.	N.E.	N.E.
Acetone	67-64-1	20.0	500 ppm	750 ppm	1000 ppm	N.E.
Titanium Dioxide	13463-67-7	15.0	10 mg/m3	N.E.	15 mg/m3 (Total Dust)	N.E.
Xylene	1330-20-7	10.0	100 ppm	150 ppm	100 ppm	N.E.
n-Butyl Acetate	123-86-4	10.0	150 ppm	200 ppm	150 ppm	N.E.
Ethylbenzene	100-41-4	5.0	100 ppm	125 ppm	100 ppm	N.E.
Calcined Aluminum Silicate	1332-58-7	5.0	2 mg/m3	N.E.	5 mg/m3 (Respirable)	N.E.
Mineral Spirits	64742-88-7	5.0	100 ppm	N.E.	100 ppm	N.E.
Propylene Glycol Monobutyl Ether	5131-66-8	5.0	N.E.	N.E.	N.E.	N.E.

Section 3 - Hazards Identification

*** Emergency Overview ***: Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Contents Under Pressure. Vapors may cause flash fire or explosion. Harmful if swallowed. Extremely flammable liquid and vapor.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: Prolonged or repeated contact may cause skin irritation. Substance may cause slight skin irritation.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. Harmful if inhaled. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Avoid breathing vapors or mists.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: IARC lists Ethylbenzene as a possible human carcinogen (group 2B). Contains Titanium Dioxide. Titanium Dioxide is listed as a Group 2B-"Possibly carcinogenic to humans" by

IARC. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of Titanium Dioxide in the formula.
May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Ingestion, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: -156 F (Setaflash)

Extinguishing Media: Film Forming Foam, Carbon Dioxide, Dry Chemical, Dry Sand, Water Fog

Unusual Fire And Explosion Hazards: Perforation of the pressurized container may cause bursting of the can. Isolate from heat, electrical equipment, sparks and open flame. Keep containers tightly closed. Vapors can travel to a source of ignition and flash back. Vapors may form explosive mixtures with air. Closed containers may explode when exposed to extreme heat. FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Water spray may be ineffective.

Special Firefighting Procedures: Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

Section 7 - Handling And Storage

Handling: Wash hands before eating. Use only in a well-ventilated area. Avoid breathing vapor or mist. Wash thoroughly after handling. Follow all MSDS/label precautions even after container is emptied because it may retain product residues.

Storage: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Do not

store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Contents under pressure. Do not expose to heat or store above 120 ° F.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Use explosion-proof ventilation equipment. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation.

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or in any other circumstances where air purifying respirators may not provide adequate protection.

Skin Protection: Nitrile or Neoprene gloves may afford adequate skin protection. Use impervious gloves to prevent skin contact and absorption of this material through the skin.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Vapor Density:	Heavier than Air	Odor:	Solvent Like
Appearance:	Aerosolized Mist	Evaporation Rate:	Faster than Ether
Solubility in H2O:	Slight	Freeze Point:	N.D.
Specific Gravity:	0.842	pH:	N.A.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid temperatures above 120 ° F. Avoid all possible sources of ignition.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: When heated to decomposition, it emits acrid smoke and irritating fumes. By open flame, carbon monoxide and carbon dioxide.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Chemical Name	LD50	LC50
Liquefied Petroleum Gas	N.E.	N.E.
Acetone	5800 mg/kg (Rat)	50100 mg/m3 (Rat, 8Hr)
Titanium Dioxide	>7500 mg/kg (Rat, Oral)	N.E.
Xylene	4300 mg/kg (Rat, Oral)	5000 ppm (Rat, Inhalation, 4Hr)
n-Butyl Acetate	13100 mg/kg (Rat, Oral)	2000 ppm (Rat, Inhalation, 4 Hr)
Ethylbenzene	3500 mg/kg (Rat, Oral)	N.E.
Calcined Aluminum Silicate	5000 mg/kg (Rat, Oral)	N.E.
Mineral Spirits	>5000 mg/kg (Rat, Oral)	>1400 ppm (Rat, Inhalation, 4Hr)
Propylene Glycol Monobutyl Ether	2200 mg/kg (Rat, Oral)	N.E.

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)
Proper Shipping Name:	Consumer Commodity	Aerosols	Aerosols
Hazard Class:	ORM-D	2.1	2.1
UN Number:	N.A.	UN1950	UN1950
Packing Group:	N.A.	N.A.	N.A.
Limited Quantity:	No	Yes	Yes

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD, PRESSURIZED GAS HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number
Xylene	1330-20-7
Ethylbenzene	100-41-4

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name	CAS Number
Modified Alkyd Resin	PROPRIETARY

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name	CAS Number
Modified Alkyd Resin	PROPRIETARY

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: AB5 D2A D2B

Section 16 - Other Information

HMIS Ratings:

Health: 2* Flammability: 4 Physical Hazard: 0 Personal Protection: X

NFPA Ratings:

Health: 2 Flammability: 4 Instability: 0

VOLATILE ORGANIC COMPOUNDS, g/L: 500

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this material safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is

the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Spartan Chemical Company, Inc.
Material Safety Data Sheet

SECTION I: PRODUCT INFORMATION

Product Name or Number (as it appears on label):
TB-CIDE PLUS II
Product Number: 1023

Product Division:
Janitorial

Spartan Chemical Company , Inc.
1110 Spartan Drive
Maumee OH 43537

Product/Technical Information: **1-(800)-537-8990**
Medical Emergency: **1-(888)-314-6171 (24 hours)**
Chemical Leak/Spill Emergency: **CHEMTREC 1-(800) 424-9300 (24 hours)**

Shipping Description: Flammable liquids, corrosive, n.o.s., 3, (8), UN2924, III (contains isopropanol, sodium hydroxide)

NFPA Ratings:	HMIS Ratings:
Health: 3 - Serious	**Health:** 3 - Serious
Fire: 2 - Moderate	**Fire:** 2 - Moderate
Reactivity: 0 - Minimal	**Reactivity:** 0 - Minimal
	Pers. Prot. Equip.: See Section VIII

SECTION II: HAZARDOUS INGREDIENTS

(Listed when present at 1% or greater, carcinogens at 0.1% or greater) All component chemicals are listed or exempted from listing on the "TSCA Inventory" of chemical substances maintained by the U.S. Environmental Protection Agency.

Chemical Name(s)	%Wt	CAS Registry No.	Table Z-1-A TWA mg/m^3	Table Z-1-A STEL mg/m^3	Table Z-1-A CEILING mg/m^3	NTP, IARC or OSHA Carcinogen
*Ortho phenyl phenol	10-15	90-43-7	1 (Dow)	Not Established	Not Established	No
Ortho benzyl para chlorophenol	5-10	1020-32-1	Not Established	Not Established	Not Established	No
Sodium hydroxide	5-10	1310-73-2	2	Not Established	Not Established	No
Para-tertiary-amylphenol	1-5	80-46-6	Not Established	Not Established	Not Established	No

Comment: *This substance is subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (SARA) and of 40 CFR 372.

SECTION III: PHYSICAL DATA

Boiling Point:	212 °F	Vapor Pressure:	Unknown
Vapor Density (AIR = 1):	Unknown	Solubility in Water:	Complete
pH:	12.0-13.0	Specific Gravity (H_2O=1):	1.07-1.10
Evaporation Rate (but.ace.=1):	<1	Percent Solid by Weight:	50-55
Physical State:	Liquid		
Appearance & Odor:	Amber brown to purple, Slight citrus fragrance		

SECTION IV: FIRE & EXPLOSIVE HAZARD DATA

Flash Point:	103°F	Method Used:	ASTM-D56
Flammable Limits:	N/A	Flame Extension:	N/A
Extinguishing Media:	Water spray, foam, carbon dioxide & dry chemical		
Special Fire Fighting Procedures:	Wear NIOSH approved self-contained breathing apparatus and protective clothing. Cool fire-exposed containers with water spray.		
Unusual Fire & Explosive Hazards:	Products of combustion are toxic.		

SECTION V: HEALTH HAZARD DATA

Threshold Limit Value:	Not Established	Primary Routes of Entry:	Inhalation, Skin Contact, Eyes and Oral

Effects of Overexposure-Conditions to Avoid:

CORROSIVE:

Causes irreversible eye damage: Symptoms may include pain, redness, swelling of the conjunctiva and tissue damage.

Causes skin burns: Symptoms may include pain, redness and tissue destruction. Harmful if absorbed through the skin.

Harmful or fatal is swallowed : Symptoms may include nausea, vomiting, pain and diarrhea.

Inhalation of spray mist may cause harm or irritation : Breathing spray mist may cause coughing and other respiratory irritation.

Do not get in eyes, on skin or clothing. Do not taste or swallow. Avoid inhalation of spray mist. Wash thoroughly with soap and water after handling and before eating , drinking or using tobacco .

Conditions Aggravated by Use: Use of this product may aggravate preexisting skin; eye and respiratory disorders including asthma and dermatitis.

Emergency & First Aid Procedures :

Eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses; if present; after the first five minutes; then continue rinsing eye.

Skin: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. Wash contaminated clothing before reuse.

Ingestion: Call a poison control center or doctor immediately for treatment advice. Have person sip glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person. Avoid alcohol.

Inhalation: Move person to fresh air. If person is not breathing; call 911 or an ambulance; then give artificial respiration; preferably mouth to mouth if possible. Call a poison control center or doctor for further treatment advice.

Note to Physician: Probable mucosal damage may conterindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression and convulsion may be needed.

SECTION VI: REACTIVITY DATA

Stability:	Stable	Incompatible Materials:	Acids; other detergents; chlorine
Hazardous Decomposition Products:	CO, CO_2	Hazardous Polymerization:	Will Not Occur

SECTION VII: SPILL OR LEAK PROCEDURES

Steps to be Taken in Case Material is Released or Spilled: Dike and contain spill with inert material (sand, earth, commercial absorbent, etc.) and transfer to containers for disposal. Rinse area with water and flush to sanitary sewer. Keep spill out of storm sewers and waterways.

Waste Disposal Method: Dispose of in compliance with all federal, state and local laws and regulations.

SECTION VIII: SPECIAL PROTECTION INFORMATION

Respiratory Protection: Not normally required when good general ventilation is provided. However, if exposure limits (see Section II) are exceeded or if respiratory irritation occurs, use of a NIOSH approved respirator suitable for the use-conditions and chemicals in Section II should be considered.

Ventilation: Provide good general ventilation. Local exhaust ventilation may be necessary for some operations.

Protective Gloves(Specify Type): Nitrile rubber; Neoprene rubber or other impervious gloves are recommended to prevent skin contact.

Eye Protection(Specify Type): Splash Goggles or face shield are recommended to prevent eye contact.

Other Protective Equipment: Long sleeve shirt and long pants. Socks and shoes. Eye wash stations and washing facilities should be readily accessible in areas where undiluted product is handled.. See 29 CFR 1910.132-138 for further guidance.

SECTION IX: SPECIAL PRECAUTIONS

Precautions; Handling & Storing: Do not store near heat or open flame. Keep from freezing. Do not contaminate water, food or feed by storage or disposal.

Other Precautions: Keep out of reach of children.

Name: Ronald T. Cook Title: Manager, Regulatory Affairs

TB-CIDE PLUS II
Ref: 29 CFR 1910.1200 (OSHA)

Effective Date: 10/23/2010
Changes: General Update

Supercedes: 01/25/2008

Material Safety Data Sheet

1 - Chemical Product and Company Identification

Manufacturer: WD-40 Company **Address: 1061 Cudahy Place (92110)** **P.O. Box 80607** **San Diego, California, USA** **92138 –0607** **Telephone:** **Emergency only: 1-888-324-7596 (PROSAR)** **Information: 1-888-324-7596** **Chemical Spills: 1-800-424-9300 (Chemtrec)** **1-703-527-3887 (International Calls)**	**Chemical Name: Organic Mixture** **Trade Name: WD-40 Aerosol** **Product Use: Lubricant, Penetrant, Drives Out Moisture, Removes and Protects Surfaces From Corrosion** **MSDS Date Of Preparation: 3/11/10**

2 – Hazards Identification

Emergency Overview:
DANGER! Flammable aerosol. Contents under pressure. Harmful or fatal if swallowed. If swallowed, may be aspirated and cause lung damage. May cause eye irritation. Avoid eye contact. Use with adequate ventilation. Keep away from heat, sparks and all other sources of ignition.

Symptoms of Overexposure:
Inhalation: High concentrations may cause nasal and respiratory irritation and central nervous system effects such as headache, dizziness and nausea. Intentional abuse may be harmful or fatal.
Skin Contact: Prolonged and/or repeated contact may produce mild irritation and defatting with possible dermatitis.
Eye Contact: Contact may be irritating to eyes. May cause redness and tearing.
Ingestion: This product has low oral toxicity. Swallowing may cause gastrointestinal irritation, nausea, vomiting and diarrhea. This product is an aspiration hazard. If swallowed, can enter the lungs and may cause chemical pneumonitis, severe lung damage and death.
Chronic Effects: None expected.
Medical Conditions Aggravated by Exposure: Preexisting eye, skin and respiratory conditions may be aggravated by exposure.

Suspected Cancer Agent:
Yes No X

3 - Composition/Information on Ingredients

Ingredient	CAS #	Weight Percent
Aliphatic Hydrocarbon	64742-47-8	45-50
Petroleum Base Oil	64742-58-1 64742-53-6 64742-56-9 64742-65-0	<25
LVP Aliphatic Hydrocarbon	64742-47-8	12-18
Carbon Dioxide	124-38-9	2-3
Surfactant	Proprietary	<2
Non-Hazardous Ingredients	Mixture	<10

4 – First Aid Measures

Ingestion (Swallowed): Aspiration Hazard. DO NOT induce vomiting. Call physician, poison control center or the WD-40 Safety Hotline at 1-888-324-7596 immediately.
Eye Contact: Flush thoroughly with water. Remove contact lenses if present after the first 5 minutes and continue flushing for several more minutes. Get medical attention if irritation persists.

Skin Contact: Wash with soap and water. If irritation develops and persists, get medical attention.
Inhalation (Breathing): If irritation is experienced, move to fresh air. Get medical attention if irritation or other symptoms develop and persist.

5 – Fire Fighting Measures

Extinguishing Media: Use water fog, dry chemical, carbon dioxide or foam. Do not use water jet or flooding amounts of water. Burning product will float on the surface and spread fire.
Special Fire Fighting Procedures: Firefighters should always wear positive pressure self-contained breathing apparatus and full protective clothing. Cool fire-exposed containers with water. Use shielding to protect against bursting containers.
Unusual Fire and Explosion Hazards: Contents under pressure. Keep away from ignition sources and open flames. Exposure of containers to extreme heat and flames can cause them to rupture often with violent force. Vapors are heavier than air and may travel along surfaces to remote ignition sources and flash back.

6 – Accidental Release Measures

Wear appropriate protective clothing (see Section 8). Eliminate all sources of ignition and ventilate area. Leaking cans should be placed in a plastic bag or open pail until the pressure has dissipated. Contain and collect liquid with an inert absorbent and place in a container for disposal. Clean spill area thoroughly. Report spills to authorities as required.

7 – Handling and Storage

Handling: Avoid contact with eyes. Avoid prolonged contact with skin. Avoid breathing vapors or aerosols. Use only with adequate ventilation. Keep away from heat, sparks, pilot lights, hot surfaces and open flames. Unplug electrical tools, motors and appliances before spraying or bringing the can near any source of electricity. Electricity can burn a hole in the can and cause contents to burst into flames. To avoid serious burn injury, do not let the can touch battery terminals, electrical connections on motors or appliances or any other source of electricity. Wash thoroughly with soap and water after handling. Keep containers closed when not in use. Keep out of the reach of children. Do not puncture, crush or incinerate containers, even when empty.
Storage: Store in a cool, well-ventilated area, away from incompatible materials Do not store above 120°F or in direct sunlight. U.F.C (NFPA 30B) Level 3 Aerosol.

8 – Exposure Controls/Personal Protection

Chemical	Occupational Exposure Limits
Aliphatic Hydrocarbon	1200 mg/m3 TWA (manufacturer recommended)
Petroleum Base Oil	5 mg/m3 TWA, 10 mg/m3 STEL ACGIH TLV 5 mg/m3 TWA OSHA PEL
LVP Aliphatic Hydrocarbon	1200 mg/m3 TWA (manufacturer recommended)
Carbon Dioxide	5000 ppm TWA (OSHA/ACGIH), 30,000 ppm STEL (ACGIH)
Surfactant	None Established
Non-Hazardous Ingredients	None Established

The Following Controls are Recommended for Normal Consumer Use of this Product
Engineering Controls: Use in a well-ventilated area.
Personal Protection:
Eye Protection: Avoid eye contact. Always spray away from your face.
Skin Protection: Avoid prolonged skin contact. Chemical resistant gloves recommended for operations where skin contact is likely.
Respiratory Protection: None needed for normal use with adequate ventilation.

For Bulk Processing or Workplace Use the Following Controls are Recommended
Engineering Controls: Use adequate general and local exhaust ventilation to maintain exposure levels below that occupational exposure limits.

Personal Protection:
Eye Protection: Safety goggles recommended where eye contact is possible.
Skin Protection: Wear chemical resistant gloves.
Respiratory Protection: None required if ventilation is adequate. If the occupational exposure limits are exceeded, wear a NIOSH approved respirator. Respirator selection and use should be based on contaminant type, form and concentration. Follow OSHA 1910.134, ANSI Z88.2 and good Industrial Hygiene practice.
Work/Hygiene Practices: Wash with soap and water after handling.

9 – Physical and Chemical Properties

Boiling Point:	361 - 369°F (183 - 187°C)	Specific Gravity:	0.8 – 0.82 @ 60°F
Solubility in Water:	Insoluble	pH:	Not Applicable
Vapor Pressure:	95-115 PSI @ 70°F	Vapor Density:	Greater than 1
Percent Volatile:	70-75%	VOC:	412 grams/liter (49.5%)
Coefficient of Water/Oil Distribution:	Not Determined	Appearance/Odor	Light amber liquid/mild odor
Flash Point:	122°F (49°C) Tag Open Cup (concentrate)	Flammable Limits: (Solvent Portion)	LEL: 0.6% UEL: 8.0%
Pour Point:	-63°C (-81.4°F) ASTM D-97	Kinematic Viscosity:	2.79-2.96cSt @ 100°F

10 – Stability and Reactivity

Stability: Stable
Hazardous Polymerization: Will not occur.
Conditions to Avoid: Avoid heat, sparks, flames and other sources of ignition. Do not puncture or incinerate containers.
Incompatibilities: Strong oxidizing agents.
Hazardous Decomposition Products: Carbon monoxide and carbon dioxide.

11 – Toxicological Information

The oral toxicity of this product is estimated to be greater than 5,000 mg/kg based on an assessment of the ingredients. This product is not classified as toxic by established criteria. It is an aspiration hazard.
None of the components of this product is listed as a carcinogen or suspected carcinogen or is considered a reproductive hazard.

12 – Ecological Information

No data is currently available.

13 - Disposal Considerations

If this product becomes a waste, it would be expected to meet the criteria of a RCRA ignitable hazardous waste (D001). However, it is the responsibility of the generator to determine at the time of disposal the proper classification and method of disposal. Dispose in accordance with federal, state, and local regulations.

14 – Transportation Information_

DOT Surface Shipping Description: Consumer Commodity, ORM-D
IMDG Shipping Description: Un1950, Aerosols, 2.1, LTD QTY

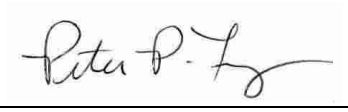
15 – Regulatory Information

U.S. Federal Regulations:

CERCLA 103 Reportable Quantity: This product is not subject to CERCLA reporting requirements, however, oil spills are reportable to the National Response Center under the Clean Water Act and many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.
SARA TITLE III:
Hazard Category For Section 311/312: Acute Health, Fire Hazard, Sudden Release of Pressure
Section 313 Toxic Chemicals: This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements: None
Section 302 Extremely Hazardous Substances (TPQ): None
EPA Toxic Substances Control Act (TSCA) Status: All of the components of this product are listed on the TSCA inventory.
California Safe Drinking Water and Toxic Enforcement Act (Proposition 65): This product does not contain chemicals regulated under California Proposition 65.
VOC Regulations: This product complies with the consumer product VOC limits of CARB, the US EPA and states adopting the OTC VOC rules.
Canadian Environmental Protection Act: One of the components is listed on the NDSL. All of the other ingredients are listed on the Canadian Domestic Substances List or exempt from notification.
Canadian WHMIS Classification: Class B-5 (Flammable Aerosol)
This MSDS has been prepared according to the criteria of the Controlled Products Regulation (CPR) and the MSDS contains all of the information required by the CPR.

16 – Other Information:

HMIS Hazard Rating:
Health – 1 (slight hazard), Fire Hazard – 4 (severe hazard), Reactivity – 0 (minimal hazard)

SIGNATURE:  TITLE: Director of Global Quality Assurance

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