

Material Safety Data Sheet

Revision Date: 09-21-2012
Product Code: FC7964

I. PRODUCT AND COMPANY IDENTIFICATION

Product Name: FC ALIPHATIC URETHANE HARDENER
Product Code: FC7964
Document ID: MFC7964
Company: NEOGARD® - a Division of JONES-BLAIR® Company
2728 Empire Central
Dallas, TX 75235
1-214-353-1600

Revision Number: 5
Prior Version Date: 06-07-2011
Chemical Family: Urethane Hardener
Intended use: Urethane Paint Hardener/Catalyst
Emergency Contact: ChemTrec Center
Emergency Phone: 1-800-424-9300
International: 703-527-3887

II. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: **DANGER!**
Irritating to mouth, throat, and stomach. Can cause abdominal discomfort.
Combustible liquid and vapor.
Causes skin irritation.
Causes eye irritation.
Causes lung irritation.
Vapor and spray mist harmful. Causes nose and throat irritation. Overexposure may cause lung damage. May cause allergic skin and respiratory reaction. Effects may be permanent.

Routes of Entry:

- Skin contact
- Inhalation
- Eye contact
- Ingestion
- Skin absorption

Target Organs Potentially Affected by Exposure:

- Skin
- Respiratory Tract
- Central nervous system
- Eyes
- Lungs
- Blood

Medical Conditions Aggravated by Exposure:

- Skin allergies.
- Individuals with lung or breathing problems or prior reaction to isocyanates must not be exposed to vapor or spray mist.
- Skin allergies.
- Respiratory disorders, including but not limited to asthma and bronchitis.
- Eye disorders.
- Lung disease
-

Immediate (Acute) Health Effects by Route of Exposure:

Inhalation Irritation: Causes nose and throat irritation.

Inhalation Toxicity: Vapor harmful. May affect the brain or nervous system causing dizziness, headache or nausea.

Skin Contact: Causes skin irritation. Sensitizer. Avoid exposure. If sensitized, repeated exposures will

Material Safety Data Sheet

Revision Date: 09-21-2012

Product Code: FC7964

Eye Contact: result in irritation, reddening, and rashes even for very low exposures. Can cause severe irritation. Eye contact may result in corneal injury. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. Temporary vision impairment (cloudy or blurred vision) is possible.

Ingestion Toxicity: Harmful if swallowed.

Long-Term (Chronic) Health Effects:

Inhalation: Isocyanate vapors or mist at concentrations above the TLV can irritate the mucous membranes in the respiratory tract causing runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function. Exposure well above the TLV may lead to generally reversible bronchitis, bronchial spasm and pulmonary edema. Repeated overexposure causes sensitization in some individuals resulting in asthma-like symptoms on subsequent exposures below the TLV. Persons with preexisting bronchial hyperactivity can respond to concentrations below the TLV with similar symptoms as well as an asthma attack. NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

Skin Contact: Prolonged contact may cause an allergic skin reaction.

III. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	%	CAS #
Homopolymer of Hexamethylene Diisocyanate	40 - 60	28182-81-2
Aliphatic Polyisocyanate Resin Polymer	15 - 40	72259-73-5
n-Butyl acetate	5 - 10	123-86-4
Light aromatic solvent naphtha	3 - 7	64742-95-6
1,2,4-Trimethylbenzene	1 - 5	95-63-6
ISOPHORONE DIISOCYANATE	0.5 - 1.5	4098-71-9

IV. FIRST-AID MEASURES

Inhalation: Remove individual to fresh air after an airborne exposure if any symptoms develop as a precautionary measure. If breathing difficulty persists or occurs later, consult a physician and have MSDS available.

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

Ingestion: If swallowed, do not induce vomiting. Get medical attention immediately.

V. FIRE FIGHTING MEASURES

Flammability Summary:

Combustible liquid and vapor.

Extinguishing Media:

Use alcohol resistant foam, carbon dioxide, dry chemical, or water spray when fighting fires. Water or foam may cause frothing if liquid is burning but it still may be a useful extinguishing agent if carefully applied to the fire. Do not direct a water stream directly into the hot burning liquid.

Fire and/or Explosion Hazards:

Vapors may be ignited by sparks, flames or other sources of ignition if material is above the flash point giving rise to a fire (Class B). Vapors are heavier than air and may travel to a source of ignition and flash back. Container may explode in heat of fire. Empty containers that retain product residue (liquid, solid/sludge, or vapor) can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose container to heat, flame, sparks, static electricity, or other sources of ignition. Any of these actions can potentially cause an explosion that may lead to injury or death.

Fire Fighting Methods and Protection:

Do not enter fire area without proper protection including self-contained

Material Safety Data Sheet

Revision Date: 09-21-2012

Product Code: FC7964

Hazardous Combustion Products: breathing apparatus and full protective equipment. Fight fire from a safe distance and a protected location due to the potential of hazardous vapors and decomposition products. Flammable component(s) of this material may be lighter than water and burn while floating on the surface. Carbon dioxide, Carbon monoxide, Hydrogen cyanide, Isocyanates, Nitrogen containing gases, Isocyanic Acid

Flash Point (°F/°C): 106 / 41
Autoignition Temperature (°F/°C): 797.0 / 425.0
Lower Flammable/Explosive Limit, % in air: 1.0
Upper Flammable/Explosive Limit, % in air: 7.6

VI. ACCIDENTAL RELEASE MEASURES

Personal Precautions and Equipment: Exposure to the spilled material may be irritating or harmful. Follow personal protective equipment recommendations found in Section VIII of this MSDS. Additional precautions may be necessary based on special circumstances created by the spill including the material spilled, the quantity of the spill, the area in which the spill occurred. Also consider the expertise of employees in the area responding to the spill.

Methods for Clean-up: Shut off ignition sources; including electrical equipment and flames. Do not allow smoking in the area. Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Dike with suitable absorbent material. Gather and store in a sealed container pending disposal.

VII. HANDLING AND STORAGE

Handling Technical Measures and Precautions: Harmful or irritating material. Avoid contacting and avoid breathing the material. Use only in a well ventilated area. Use spark-proof tools and explosion-proof equipment. As with all chemicals, good industrial hygiene practices should be followed when handling this material. Wash thoroughly after handling. Do not get in eyes, on skin and clothing. Ground and bond containers when transferring material. "Empty" containers retain product residue (liquid and/or vapor) and can be dangerous.

Storage Technical Measures and Conditions: Store in a cool dry place. Keep container(s) closed. Keep away from sources of ignition.

VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Measures: Use local exhaust ventilation or other engineering controls to minimize exposure.

Respiratory Protection: General or local exhaust ventilation is the preferred means of protection. In cases where ventilation is inadequate, respiratory protection may be required to avoid overexposure. Follow respirator manufacturer's directions for respirator use. For poorly ventilated areas or during spray application use NIOSH approved supplied air respirator unless air monitoring demonstrates vapor/mist levels below applicable limits. When monomeric isocyanate concentrations are below 0.05 ppm (10 times the 8 hour TWA exposure limit), an appropriate combination organic vapor and particulate respirator (NIOSH approved) may be appropriate. An end-of-service-life Indicator (ESLI) or a change schedule is mandatory.

Eye Protection: Wear chemically resistant safety glasses with side shields when handling this product. Wear additional eye protection such as chemical splash goggles and/or face shield when the possibility exists for eye contact with splashing or spraying liquid, or airborne material. Have an eye wash station available.

Skin Protection: Avoid all skin contact by covering as much of the exposed skin area as possible with appropriate clothing to prevent skin contact. Wash hands and other exposed areas with

Material Safety Data Sheet

Revision Date: 09-21-2012

Product Code: FC7964

mild soap and water before eating, drinking, and when leaving work. Clothing suitable to prevent skin contact. Wear chemical resistant gloves.

Control Parameters:

Chemical Name	ACGIH TLV-TWA	ACGIH STEL	OSHA PEL-TWA
Homopolymer of Hexamethylene Diisocyanate	5mg/m ³ TWA	10mg/m ³ (15 Min.)	
n-Butyl acetate	150 ppm TWA; 713 mg/m ³ TWA	200 ppm STEL; 950 mg/m ³ STEL	150 ppm TWA; 710 mg/m ³ TWA
1,2,4-Trimethylbenzene	25ppm; 123mg/m ³ TWA		
ISOPHORONE DIISOCYANATE	0.005 ppm (TWA)		

IX. PHYSICAL AND CHEMICAL PROPERTIES

Color:	Colorless
Physical State:	Liquid
Boiling Point - Low (°F):	244.0
Boiling Point - High (°F):	335.0
Odor:	Ester-Like
Vapor Density:	4.15 (air = 1)
Vapor Pressure:	7.80
VOC (g/l) (Regulatory, Calculated):	183.34
(Actual, Calculated):	183.34
Solubility in Water:	Reacts slowly with water.
Octanol/Water Partition Coefficient:	Not Available
Volatiles, % by Volume (Calculated):	21.08
Volatiles, % by weight (Calculated):	17.07
Density:	9 - 9 lbs./Gal.

Physical and Chemical Properties are calculated target or range values for single packaged items and do not represent compliance values for multi-component (mixed) systems.

X. STABILITY AND REACTIVITY

Stability:	Stable under normal conditions.
Conditions to Avoid:	Temperatures above flash point in combination with sparks, open flames, or other sources of ignition. Moisture (potentially will lead to gas formation and warming). Contamination.
Materials to Avoid/Chemical Incompatibility:	Oxidizing agents, Caustics (bases, alkalis), Acids
Polymerization:	Contact with moisture, other materials that react with isocyanates or temperatures above 350° F may cause polymerization.
Hazardous Decomposition Products:	Carbon dioxide, Carbon monoxide, Hydrogen cyanide, Isocyanates, Nitrogen containing gases, Isocyanic Acid

XI. TOXICOLOGICAL INFORMATION

Component Toxicology Data:

Chemical Name	CAS Number	LD50/LC50
n-Butyl acetate	123-86-4	Oral LD50 Rat 14,130 mg/kg Dermal LD50 Guinea pig 8,770 mg/kg Inhalation LC50 (6h) Rat > 1,800 ppm
Light aromatic solvent naphtha	64742-95-6	Oral LD50 Rat 4 - 8 ml/kg Dermal LD50 Rat > 2 g/kg Inhalation LC50 (4h) Rat 6 - 10 mg/L
1,2,4-Trimethylbenzene	95-63-6	Oral LD50 Rat 5 g/kg Inhalation LC50 (18h) Rat 18 G/M3
ISOPHORONE DIISOCYANATE	4098-71-9	Oral LD50 Rat 5,490 mg/kg Dermal LD50 Rabbit 4,780 mg/kg Inhalation LC50 (4h) Rat 40 mg/kg

Material Safety Data Sheet

Revision Date: 09-21-2012
Product Code: FC7964

Carcinogens:

Chemical Name	CAS Number	IARC	NTP	OSHA
Not applicable				

XII. ECOLOGICAL INFORMATION

Toxicity data, if available, are listed below.

XIII. DISPOSAL CONSIDERATIONS

Disposal Methods: Refer to other sections of this MSDS to determine the toxicity and physical characteristics of the material to determine the proper waste identification and disposal in compliance with applicable regulations.

XIV. TRANSPORTATION INFORMATION

This section provides basic shipping classification information and does not contain all regulatory transportation details. Refer to all applicable regulations for domestic, international, air, vessel and ground transportation requirements and restrictions.

DOT Basic Description: Paint Related Material
Hazard Class: 3
UN Number: UN1263
Packing Group: III
Other: Not regulated for non-bulk domestic ground shipments for packaging of 450 liters (119 gallons) or less (DOT 49CFR 173.150(f)).

IATA Air Shipping Name: Paint Related Material
IATA Hazard Class: 3
IATA UN Number: UN1263
IATA Packing Group: III

IMO Shipping Name: Paint Related Material
IMO Hazard Class: 3
IMO UN Number: UN1263
IMO Packing Group: III

Marine Pollutant: N

XV. REGULATORY INFORMATION

United States Federal Regulations:

TSCA Status All components of this product are either listed on the TSCA Inventory; or, are not subject to the inventory notification requirements.

SARA EHS Chemicals	CAS #	%
Isophorone diisocyanate	4098-71-9	0.5 - 1.5

CERCLA	CAS #	%
n-Butyl Acetate	123-86-4	5 - 10

SARA 313	CAS #	%
1,2,4-Trimethylbenzene	95-63-6	1 - 5
Isophorone diisocyanate	4098-71-9	0.5 - 1.5

SARA 311/312	
Health (Acute):	Y
Health (chronic):	Y

Material Safety Data Sheet

Revision Date: 09-21-2012
Product Code: FC7964

Fire (Flammable): Y
Pressure: N
Reactivity: Y

U. S. State Regulations:

California Prop 65 Chemicals

	<u>CAS #</u>	<u>%</u>
Cancer		
Benzene	71-43-2	0.001- 0.01
Reproductive		
Benzene	71-43-2	0.001- 0.01

Canadian Regulations:

CEPA DSL: The components of this product ARE listed on the Canadian Domestic Substances List.
WHMIS Hazard Class: B3 D2A

XVI. ADDITIONAL INFORMATION

Prepared By: Regulatory Department
Disclaimer: This MSDS has been prepared in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200) and Canada's Controlled Product Regulations (CPR). To the best of our knowledge the information contained herein is accurate. Determination of safe handling, application and use of this material is the responsibility of the end user. This information is furnished without warranty, expressed or implied.
Print Date: September 21, 2012