

Material Safety Data Sheet

Revision Date: 10-23-2008

Product Code: 70715

I. PRODUCT AND COMPANY IDENTIFICATION

Product Name: EPOXY RESIN HARDENER
Product Code: 70715
Document ID: M70715
Company: NEOGARD® - a Division of JONES-BLAIR® Company
2728 Empire Central
Dallas, TX 75235
1-214-353-1600

Revision Number: 2
Prior Version Date: 07-16-2008
Chemical Family: Epoxy Hardener
Intended use: Epoxy Coating Polyamide Co-Reactant
Emergency Contact: ChemTrec Center
Emergency Phone: 1-800-424-9300

II. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: **DANGER!**
May be fatal if swallowed and may cause organ damage.
Causes eye burns.
Causes skin burns.
May cause allergic skin reaction.
Vapor harmful.
May be harmful if absorbed through skin.

Routes of Entry:

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

Target Organs Potentially Affected by Exposure:

- Central nervous system
- Skin
- Kidneys
- Liver

Medical Conditions Aggravated by Exposure:

- Respiratory disorders, including but not limited to asthma and bronchitis.
- Skin allergies.
- Eye disorders.
- Skin disorders.
- Contains salicylic acid which may cause allergic reactions in aspirin-sensitive people.
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Immediate (Acute) Health Effects by Route of Exposure:

Inhalation Irritation: Causes nose and throat irritation. Causes lung irritation. Irritating to the nose, throat, and respiratory tract. Can cause severe respiratory irritation, dizziness, weakness, fatigue, nausea, headache and possible unconsciousness.

Inhalation Toxicity: May cause allergic respiratory reaction. Inhalation of high concentrations may be corrosive with symptoms of coughing, burning, ulceration and pain.

Skin Contact: Corrosive to skin tissue. Can cause chemical burns. Sensitizer. Avoid exposure. If sensitized, repeated exposures will result in irritation, reddening, and rashes even for very low exposures.

May cause allergic skin reaction.

May cause skin irritation.

Skin Absorption: May be harmful if absorbed through skin. Contains a substance which may result in

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Eye Contact: absorption of harmful amounts upon prolonged or widespread contact.
Corrosive to eye tissue. Can cause severe irritation, tearing, and burns that can quickly lead to permanent injury including blindness. Can cause substantial irritation.

Ingestion Toxicity: Harmful if swallowed. This product may produce corrosive damage to the gastrointestinal tract if it is swallowed.

Long-Term (Chronic) Health Effects:

Inhalation: Upon prolonged and/or repeated exposure, can cause severe respiratory irritation, dizziness, weakness, fatigue, nausea, headache and possible unconsciousness. Overexposure may cause lung damage. Prolonged and continuous exposure to an excessive concentration has been shown to affect respiratory function. This effect may be severe. Overexposure may cause respiratory tract and lung damage.

Skin Contact: Upon prolonged or repeated contact can cause severe irritation, defatting, and dermatitis. May cause lingering affects but not likely to result in permanent damage if the exposure is eliminated. Skin sensitization, characterized by redness, inflammation, itching and/or burning may result from prolonged or repeated contact with this material. Prolonged or repeated contact may cause irritation.

Skin Absorption: Upon prolonged or repeated exposure, harmful if absorbed through the skin. May cause severe irritation and systemic damage.

Chronic Symptoms of Exposure: Contains ingredients which can cause liver and kidney damage.

III. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	%	CAS #
Benzyl alcohol	10 - 30	100-51-6
3-amino methyl-3,5,5 Trimethyl Amine	10 - 30	2855-13-2
Polyoxypropylenediamine	7 - 13	9046-10-0
Epoxy Amine Adduct	7 - 13	NAV
Oxirane based epoxy homopolymer	1 - 5	25085-99-8
2,4,6-Tri(dimethylaminomethyl)phenol	1 - 5	90-72-2
Hydroxybenzoic Acid	1 - 5	69-72-7
M-Aminoethylpiperazine	1 - 5	140-31-8
Diethylenetriamine	0.5 - 1.5	111-40-0

IV. FIRST-AID MEASURES

Inhalation: Remove to fresh air. If breathing is difficult, have a trained individual administer oxygen. If not breathing, give artificial respiration. Get medical attention immediately.

Eyes: Immediately flush eyes with plenty of water for at least 20 minutes retracting eyelids often. This corrosive material can cause immediate and permanent eye damage. Tilt the head to prevent chemical from transferring to the uncontaminated eye. Get immediate medical attention and monitor the eye daily as advised by your physician.

Skin Contact: Wash with soap and water. Remove contaminated clothing and laundry. Get medical attention if irritation develops or persists. Thoroughly wash or discard clothing and shoes before reuse.

Ingestion: Corrosive. Do not induce vomiting! Drink one glass of water followed by milk if available. Seek medical attention immediately and give the medical care provider with this MSDS. Never give anything by mouth to an unconscious person.

V. FIRE FIGHTING MEASURES

Extinguishing Media: Use alcohol foam, carbon dioxide, or water spray when fighting fires involving this material.

Fire and/or Explosion Hazards: Material may be ignited only if preheated to temperatures above the high flash point, for example in a fire. Container may explode in heat of fire.

Fire Fighting Methods and Protection: Do not enter fire area without proper protection including self-contained

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Hazardous Combustion Products: breathing apparatus and full protective equipment. Flammable component(s) of this material may be lighter than water and burn while floating on the surface.
Carbon dioxide, Carbon monoxide, Nitrogen containing gases, Ammonia, Aldehydes, Phenol, Ketones

Flash Point (°F/°C): 205 / 96
Autoignition Temperature (°F/°C): 716.0 / 380.0
Lower Flammable/Explosive Limit, % in air: 0.7
Upper Flammable/Explosive Limit, % in air: 5.0

VI. ACCIDENTAL RELEASE MEASURES

Personal Precautions and Equipment: Exposure to the spilled material may be severely irritating or toxic. Follow personal protective equipment recommendations found in Section VIII of this MSDS. Personal protective equipment needs must be evaluated based on information provided on this sheet and the special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred, and the expertise of employees in the area responding to the spill. Never exceed any occupational exposure limits.

Methods for Clean-up: 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: Toxic or severely irritating material. Avoid contacting and avoid breathing the material. Use only in a well ventilated area. 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. "Empty" containers retain product residue (liquid and/or vapor) and can be dangerous. Remove contaminated clothing and wash before reuse.

Storage Technical Measures and Conditions: Store in a cool dry place. Keep container(s) closed.

VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Measures: Local exhaust ventilation or other engineering controls may be required when handling or using this product to avoid overexposure. Engineering controls must be designed to meet the OSHA chemical specific standard in 29 CFR 1910. Facilities storing or using this material should be equipped with an eyewash and safety shower.

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.

Eye Protection: Wear chemical splash goggles when handling this product. Additionally, wear a face shield when the possibility of splashing of liquid exists. Do not wear contact lenses. Have an eye wash station available. 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.

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 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 Exposure Limits
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Benzyl alcohol	Not applicable	Not applicable
3-amino methyl-3,5,5 Trimethyl Amine	Not applicable	Not applicable
Polyoxypropylenediamine	Not applicable	Not applicable
Epoxy Amine Adduct	Not applicable	Not applicable
Oxirane based epoxy homopolymer	Not applicable	Not applicable
2,4,6-Tri(dimethylaminomethyl)phenol	Not applicable	Not applicable
Hydroxybenzoic Acid	3mg/m ³ (respirable)	5mg/m ³ (respirable); 15mg/m ³ (total dust)
M-Aminoethylpiperazine	Not applicable	Not applicable
Diethylenetriamine	1ppm, 4.2mg/m ³ TWA	Not applicable

IX. PHYSICAL AND CHEMICAL PROPERTIES

Color:	Colorless
Physical State:	Liquid
Boiling Point - Low:	392.0
Boiling Point - High:	476.6
Evaporation Rate (n-BA = 1):	> 1
Odor:	Aromatic, Ammonia Like
Vapor Density:	0.95
Vapor Pressure:	1.00
VOC (g/l) (Regulatory, Calculated):	0.00
(Actual, Calculated):	0.00
Viscosity:	150 - 250
Solubility in Water:	Low; 10-39%
Octanol/Water Partition Coefficient:	Not Available
Volatiles, % by Volume (Calculated):	0.00
Volatiles, % by weight (Calculated):	0.00
Wt/Gal:	8.32 - 8.52

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 the high flash point of this combustible material in combination with sparks, open flames, or other sources of ignition. Contamination. High humidity,
Materials to Avoid/Chemical Incompatibility:	Acids, Aluminum alloys, Oxidizing agents, Amines, Caustics (bases, alkalis), Lead acetate, Iron Salts, Iodine, Spirit nitrous ether, Acrylates, Aldehydes, Alcohols, Halogenated Hydrocarbons, Ketones, Nitrites
Polymerization:	Will not occur.
Hazardous Decomposition Products:	Carbon monoxide, Carbon dioxide, Ammonia, Nitrogen containing gases, Aldehydes, Phenol, Ketones, Ammonia, Ethylenediamine, Amines

XI. TOXICOLOGICAL INFORMATION

Component Toxicology Data:

Chemical Name	CAS Number	LD50/LC50
Benzyl alcohol	100-51-6	Oral LD50 Rat 1230 - 3100 mg/kg Dermal LD50 Rabbit 2000 mg/kg Inhalation LC50 (8h) Rat 1000 ppm
3-amino methyl-3,5,5 Trimethyl	2855-13-2	Oral LD50 Rat 1030 mg/kg

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Amine

Polyoxypropylenediamine	9046-10-0	Dermal LD50 > 2000 mg/kg Oral LD50 > 2000 mg/kg
Oxirane based epoxy homopolymer	25085-99-8	Oral LD50 Rat > 5000 mg/kg Dermal LD50 Rabbit 4000 mg/kg
2,4,6-Tri(dimethylaminomethyl)phenol	90-72-2	Oral LD50 < 2000 mg/kg Dermal LD50 <= 2000 mg/kg
Hydroxybenzoic Acid	69-72-7	Oral LD50 Rat 891 mg/kg Oral LD50 Mouse 480 mg/kg Oral LD50 Rabbit 1300 mg/kg Dermal LD50 Rabbit > 10000 mg/kg Dermal LD50 Rat > 2000 mg/kg Inhalation LC50 (1h) Rat > 900 mg/m ³
M-Aminoethylpiperazine	140-31-8	Oral LD50 Rat 2.15 g/kg Dermal LD50 Rabbit 0.9 g/kg
Diethylenetriamine	111-40-0	Oral LD50 Rat 1080 - 2330 mg/kg Dermal LD50 Rabbit 1000 mg/kg Dermal LD50 Rat 672 - 1240 mg/kg

Carcinogens:

Chemical Name	CAS Number	IARC	NTP	OSHA
Not applicable				

XII. ECOLOGICAL INFORMATION

Toxicity data, if available, are listed below.

Overview: Harmful to fish and other water organisms.

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, Not-Regulated

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.

CAS # %

SARA EHS Chemicals

Epichlorohydrin 106-89-8 0.001- 0.01

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CERCLA

Not applicable

SARA 313

Not applicable

SARA 311/312

Health (Acute): Y

Health (chronic): Y

Fire (Flammable): N

Pressure: N

Reactivity: N

U. S. State Regulations:

California Prop 65 Chemicals

Cancer

Phenyl glycidyl ether 122-60-1 0.001- 0.01

1-Chloro-2,3-epoxypropane 106-89-8 0.001- 0.01

Reproductive

Not applicable

Canadian Regulations:

CEPA DSL:

The components of this product ARE listed on the Canadian Domestic Substances List.

WHMIS Hazard Class:

D2A E

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.

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