

Material Safety Data Sheet: nora[®] membrane PART B

Date: 11.9.2010

1) Chemical Product and Company Identification

Product details:

Manufacturer/Supplier:
 nora systems, Inc.
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 01843 USA
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 www.nora.com/us

Emergency Phone: 800-424-9300 (CHEMTREC)

Trade Name and Synonyms: nora[®] membrane
 Product use: EPOXY HARDENER PART B
 CAS number: Mixture
 Product Description: **Product use Moisture Vapor Barrier**
Generic description Epoxy Resin Based Formulation

2) Composition / Information on Ingredients

| Components | CAS | # Percent |
|-----------------------|----------------|-----------|
| Benzyl alcohol | 100-51-6 | 10 - 30 |
| Phenol | 108-95-25 - 10 | |
| Triethylene tetramine | 112-24-3 | 5 – 10 |

3) Hazardous Identifications

Emergency overview:

This product is irritating to the eyes, respiratory system and skin. This product may cause skinsensitization. Contact with this product may cause severe eye damage.

Potential health effects:

Eyes

Contact can cause moderate to severe irritation and possible injury to the eyes.

Skin

This product may cause irritation to the skin. May cause sensitization by skin contact.

Inhalation

May cause breathing disorders and lung damage. Repeated inhalation may be harmful; lung irritation and serious central nervous system disorders may result. Toxic by inhalation.

Ingestion

Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Target organs

Respiratory system.

Skin.

Central nervous system.

4) First Aid Measures

First aid procedures:

Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention or advice.

Skin contact

Contact For skin contact, flush with large amounts of water. If irritation persists, get medical attention.

Inhalation

If inhaled, immediately remove the affected person to fresh air. If symptoms persist, get medical attention

Ingestion

If ingested, get immediate medical attention. Do not induce vomiting unless instructed to do so by medical personnel. Never give anything by mouth to a victim who is unconscious or is having convulsions.

Notes to physician

Medical conditions aggravated by exposure

5) Fire-Fighting Measures and Fire Hazards

Hazardous combustion products

Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

Extinguishing media

Dry chemical, carbon dioxide. Do not direct a solid stream of water or foam into hot, burning pools; this may result in frothing and increase fire intensity.

Sensitivity to mechanical impact

None Known

Sensitivity to static discharge

None Known

Unusual fire & explosion hazards

During a fire, irritating and highly toxic gases may be generated during combustion or decomposition. High temperatures can cause sealed containers to rupture due to a buildup of internal pressures. Cool with water.

Fire fighting equipment/instructions

Firefighters should wear full protective clothing including self contained breathing apparatus

Flash point

Flash point > 200 °F (> 93.3 °C)

6) Accidental Release Measures (Spills or Leaks)

Emergency action

Wear appropriate protective equipment and clothing during clean-up. Do not allow product to enter sewer or waterways. Follow all Local, State, Federal and Provincial regulations for disposal.

Containment

Isolate spill area. Stop discharge if safe to do so. Stop material from contaminating soil or from entering sewers or water streams. Cover spills with absorbent clay or sawdust and place in closed chemical waste containers. Use caution to avoid falls. Spilled adhesive is very slippery.

Reporting

See Federal reporting requirements listed in Section 15. We recommend you contact local authorities to determine if there may be other local reporting requirements.

7) Handling and Storage

Handling

Do not get this material in your eyes, on your skin, or on your clothing. Wash hands after handling and before eating. Launder work clothes frequently.

Storage

Storage Keep the container tightly closed and in a cool, well-ventilated place. Do not pressurize, cut, heat or weld containers. Empty product containers may contain product residue. Do not reuse empty containers.

Empty container precaution

Attention! Follow label warnings even after container is emptied since empty containers may retain product residues. Do not reuse empty container without professional cleaning for food, clothing, or products for human or animal consumption, or where skin contact can occur.

8) Exposure Controls, Personal Protection

Engineering controls:

Engineering controls Provide local and general exhaust ventilation to effectively remove and prevent buildup of any vapors or mists generated from the handling of this product.

Personal protective equipment:

Eye protection

Eye protection Wear safety glasses; chemical goggles (if splashing is possible).

Skin and body protection

Use impervious gloves. Work clothing sufficient to prevent all skin contact should be worn, such as coveralls and long sleeves.

Respiratory protection

None required where adequate ventilation conditions exist. Special applications may necessitate the use of more stringent respiratory protection equipment.

General

Eyewash fountains and emergency showers should be readily available.

Additional exposure data

US ACGIH Threshold Limit Values: Time Weighted Average (TWA): mg/m3 & ppm

Phenol 108-95-2 PHENOL 5 PPM

US NIOSH Pocket Guide to Chemical Hazards: Ceiling Limit Value and Time Period (if specified)

Phenol 108-95-2 PHENOL 60 MGM3 - 15.6 PPM 15-min

US OSHA Table Z-1-A: Time Weighted Average (TWA): mg/m3 & ppm

Phenol 108-95-2 PHENOL 19 MGM3 - 5 PPM

9) Physical and Chemical Properties

Target solids 100 %

pH Alkaline

Density 1.06 g/cc

Odor Ammonia

Color Light Yellow

10) Chemical Stability and Reactivity Information

Incompatibility: Strong acids, alkalis and oxidizing agents.

Hazardous reactions/decomposition products

Hazardous combustion products may include carbon monoxide, carbon dioxide and hydrocarbon fragments.

Hazardous polymerization

Will not occur

Conditions to avoid

of temperature and direct sunlight. Do not freeze.

Materials to avoid

Strong acids, alkalis and oxidizing agents.

Stability

Stable under normal conditions.

11) Toxicological Information

Sensitization to material US ACGIH Threshold Limit Values: Skin designation

Phenol 108-95-2 Can be absorbed through the skin.

12) Ecological Information

Ecotoxicological information: No data available for this product.

13) Disposal Considerations

It is the obligation of each user of the product mentioned herein to determine and comply with the requirements of all applicable local, state and federal regulations.

Waste disposal

Waste must be handled in accordance with all federal, state, provincial, and local regulations.

14) Transportation Information

DOT

Not regulated as hazardous goods

IATA

Not regulated as hazardous goods.

IMDG

Not regulated as hazardous goods.

15) Regulator Information

This MSDS is prepared and distributed pursuant to the Federal Hazard Communication Standard, 29 CFR 1910.1200. The product(s) covered by this (MSDS) do not include any of the substances above a concentration of 0.1% weight by weight (w/w) in the Candidate List of Substances of Very High Concern (SVHC) for authorization published or proposed by ECHA as follows: the list of 15 substances for authorization published on October 28, 2008, the list of 15 substances proposed on August 31, 2009, the list of 14 substances proposed on January 13, 2010, the list of 8 substances proposed on March 8, 2010, the list of 8 substances proposed on June 18, 2010, the list of 11 substances proposed on October 14, 2010.

Federal regulations

All components are on the U.S. EPA TSCA Inventory List.

State regulations

If this product contains any California Proposition 65 chemicals at reportable levels they will be listed below.

International regulations

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

Some of the components of this product are not currently included on the Canadian Domestic Substance List (DSL), therefore, this product is only available in Canada for Research and Development purposes.

HMIS Ratings Health: 2

Flammability: 1

Physical hazard: 0

Personal protection: X

SARA 311/312 HAZARD CATEGORIES

Immediate Hazard Yes

Delayed Hazard No

Fire Hazard No

Pressure Hazard No

Reactivity Hazard No

WHMIS status Controlled

WHMIS labeling



WHMIS classification D2A - Other Toxic Effects-VERY TOXIC
D2B - Other Toxic Effects-TOXIC

16) Other Information

Disclaimer

The data in this MSDS has been compiled from publicly available sources. This data relates only to the designated product and not to the use of said product in combination with other materials. 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 which exist. Responsibility for proper precautions and safe use of the product lies with the user. All data in this MSDS is typical of the product as a whole, and does not represent any individual lot or batch, therefore, Nora Systems, Inc. makes no warranty about the accuracy of the data herein and assumes no liability for the use of such data. It is the responsibility of the user to comply with all applicable federal, state, and local laws and regulations.

17) Definitions

ACGIH: American Conference of Governmental Industrial Hygienists.

ASPIRATION HAZARD: The danger of drawing material into the lungs, leading to an inflammatory response that can be fatal.

CFR: Code of Federal Regulations (U.S.). A collection of regulations established by law.

CARCINOGEN: A material that either causes cancer in humans, or is considered capable of causing cancer in humans.

COMBUSTIBLE: A term used to classify certain materials with low flash points that ignite easily. For OSHA it has a flash point greater than 100°F (38°C) but below 200°F (93°C).

DOT: U.S. Dept. of Transportation.

FLAMMABLE: A material that gives off vapors that readily ignites at room temperatures. OSHA defines flammable as a material with a flash point less than 100°F (38°C).

FLASH POINT: The lowest point at which a liquid gives off sufficient vapor to form an ignitable mixture with air.

HAZARDOUS: Any substance or mixture of substances having properties capable of producing adverse effects on the health or safety of a human.

IARC: International Agency for Research on Cancer.

IRRITANT: A substance capable of causing an inflammatory effect on living tissue by chemical action at the site of contact.

LD50: Lethal Dose 50. The single dose of a substance that causes death of 50% of an animal population from exposure to the substance from any route other than inhalation.

LEL: Lower Explosive Limit. The lowest concentration of vapor that burns or explodes when an ignition source is present at ambient temperatures.

LFL: Lower Flammable Limit. See L.E.L.

MSHA: Mine Safety and Health Administration (U.S.).

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

NIOSH: National Institute of Occupational Safety and Health (U.S.).

NTP: National Toxicology Program (U.S.).

OECD: Organization for Economic Co-operation and Development.

OSHA: The Occupational Safety and Health Administration (U.S.).

PEL-STEL: Permissible Exposure Limit, Short Term Exposure Limit.

SCBA: Self-contained breathing apparatus.

SYSTEMIC TOXICITY: Adverse effects induced by a substance which affects the body in a general manner rather than locally.

TDG: Transportation of Dangerous Goods (Canada).

TLV-TWA: Threshold Limit Value, Time Weighted Average.

TSCA: Toxic Substance Control Act.

TOXIC: Any chemical or material that has evidence of an acute or chronic health hazard and is listed in the NIOSH Registry of Toxic Effects of Chemical Substances.

VHAP: Volatile Hazardous Air Pollutant

V.O.C.: Volatile Organic Compound.

WHMIS: Workplace Hazardous Materials Information System (Canada).