

Material Safety Data Sheet

NOVOC Performance Resins, LLC
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IN CASE OF EMERGENCY CALL CHEMTREC 1-800-424-9300
CONTACT ONLY IN THE EVENT OF CHEMICAL EMERGENCIES INVOLVING
A SPILL, LEAK, FIRE, EXPOSURE, OR ACCIDENT INVOLVING CHEMICALS.

PRODUCT NAME: NOVOXY 90, Epoxy Hardener (Formerly known as PTL5 Epoxy Hardener)
Effective Date: 02/09/2004

1. INGREDIENTS:

Polyamido Amine (CAS# 68605-86-7) 40 -100%

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). In addition, other substances not Hazardous per this OSHA Standard may be listed. Where proprietary Ingredient shows, the identity may be made available as provided in this standard.

2. PHYSICAL DATA:

BOILING POINT: Decomposes
VAP PRESSURE: < 1 mmHg @20°C, 68°F
VAP DENSITY: 6.53
SOL. IN WATER: Negligible to slightly soluble.
SP. GRAVITY: 0.95
APPEARANCE: Amber colored liquid
ODOR: Amine odor

3. FIRE AND EXPLOSION HAZARD DATA:

FLASH POINT: 200°F, 93°C
METHOD USED: PMCC
FLAMMABLE LIMITS
LFL: Not Determined
UFL: Not Determined
EXTINGUISHING MEDIA: Water fog, alcohol foam, CO₂, dry chemical.
FIRE & EXPLOSION HAZARDS: None known. Treat as combustible.
FIRE-FIGHTING EQUIPMENT: Use a positive pressure, self-contained breathing apparatus and protective clothing.

4. REACTIVITY DATA:

STABILITY: (CONDITIONS TO AVOID) Can autoignite in air at approximately 572°F, 300°C.
INCOMPATIBILITY: (SPECIFIC MATERIALS TO AVOID) Epoxy resins under uncontrolled conditions.
HAZARDOUS DECOMPOSITION PRODUCTS: Nitrogen oxides when burned.
HAZARDOUS POLYMERIZATION: Will not occur.

5. ENVIRONMENTAL AND DISPOSAL INFORMATION:

ACTION TO TAKE FOR SPILLS/LEAKS: Large spill -- dike up and pump into appropriate containers. Small spill -- use noncombustible absorbent material/sand and shovel into suitable containers.
DISPOSAL METHOD: Large quantities should be recovered. Collect small quantities in waste metal drums and seal for removal to an approved landfill, or incinerate in accordance with local, state, and federal regulations.

6. HEALTH HAZARD DATA:

EYE: May cause severe irritation with corneal injury, which may result in permanent impairment of vision, even blindness. Vapors may irritate eyes.

SKIN CONTACT: May cause severe injury to skin following prolonged or repeated contact, and may cause skin sensitization or other allergic responses.

SKIN ABSORPTION: A single prolonged exposure may result in the material being absorbed in harmful amounts. The LD₅₀ for skin absorption in rabbits is about 660 mg/Kg.

INGESTION: Single dose oral toxicity is low. The oral LD₅₀ for rats is 2140-3990 mg/Kg. Ingestion may cause gastrointestinal irritation or ulceration. Ingestion may cause burns of mouth and throat.

INHALATION: May cause respiratory sensitization or asthma in susceptible individuals. Excessive exposure may cause irritation to upper respiratory tract.

SYSTEMIC & OTHER EFFECTS: Repeated excessive exposures may cause liver and kidney effects. Results of in vitro ("test tube") mutagenicity tests have been negative.

7. FIRST AID:

EYES: Immediate and continuous irrigation with flowing water for at least 30 minutes is required. Promptly seek medical attention.

SKIN: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing, preferably under a safety shower. Seek medical attention immediately. Avoid prolonged or repeated contact to skin. Wash thoroughly after handling.

INGESTION: Do not induce vomiting. Give large amounts of water or milk if available and transport to medical facility.

INHALATION: Remove to fresh air if effects occur. Consult a physician.

NOTE TO PHYSICIAN: Corrosive. May cause stricture. If lavage is performed, suggest endotracheal and/or esophagoscopy control. If burn is present, treat as any thermal burn, after decontamination. No specific antidote. Supportive care. Treatment based on judgement of the physician in response to reactions of the patient.

8. HANDLING PRECAUTIONS:

EXPOSURE GUIDELINE(S): None established.

VENTILATION: Control airborne concentration below the exposure guideline. Use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations.

RESPIRATORY PROTECTION: Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, use an approved airpurifying respirator.

SKIN PROTECTION: Use protective clothing impervious to this material. Selection of specific items such as gloves, boots, apron, or full-body suit will depend on operation. Safety shower should be located in immediate work area. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse. Contaminated leather items, such as shoes, belts and watchbands, should be removed and destroyed.

EYE PROTECTION: Use chemical goggles. If vapor exposure causes eye irritation, use a fullface respirator. Eye wash fountain should be located in immediate work area.

9. ADDITIONAL INFORMATION:

SPECIAL PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Ground all transfer equipment. Hold bulk storage under a nitrogen blanket. This product should not come in contact with copper or copper-bearing alloys. Good general housekeeping procedure should be followed.

10. NFPA HAZARD RATING:

| | | |
|-----------------------|------------|---|
| 4 = EXTREME | HEALTH | 2 |
| 3 = HIGH | FIRE | 1 |
| 2 = MODERATE | REACTIVITY | 0 |
| 1 = SLIGHT SPECIFIC - | | |
| 0 = INSIGNIFICANT | | |

11. REGULATORY INFORMATION:

STATUS ON SUBSTANCE LISTS:

The concentrations shown in this document are maximum or ceiling levels (expressed in weight %, unless otherwise specified) to be used for regulations. Trade Secrets are indicated by "TS".

FEDERAL EPA:

COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, and LIABILITY ACT of 1980 (CERCLA):

Requires notification of the National Response Center of release of quantities of Hazardous Substances equal to or greater than the reportable quantities (RQ's) in 40 CFR 302.4.

Components present in this product at level which could require reporting under the statute are:

| Chemical Name | CAS Number | % By Weight | RQ |
|---------------|------------|-------------|----|
| NONE | | | |

SUPERFUND AMENDMENTS and REAUTHORIZATION ACT of 1986 (SARA) TITLE III: **Sections 301-304** require emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355. Components present in this product at a level which could require reporting under this statute are:

| Chemical Name | CAS Number | % By Weight |
|---------------|------------|-------------|
| NONE | | |

Sections 311-312 require products be reviewed and applicable EPA Hazard Definitions be identified and made known.

EPA HAZARD CLASSIFICATIONS:

| | | | | |
|--------------|----------------|-------------|-----------------|-----------------|
| Acute Hazard | Chronic Hazard | Fire Hazard | Pressure Hazard | Reactive Hazard |
| <i>no</i> | <i>yes</i> | <i>no</i> | <i>no</i> | <i>no</i> |

Section 313 requires submission of annual reports of release of toxic chemicals that appear in 40 CFR 372 (for SARA 313). This information must be included in all MSDSs that are copied and distributed for this material. Components present in this product at level which could require reporting under the statute are:

| Chemical Name | CAS Number | % By Weight |
|---------------|------------|-------------|
| NONE | | |

If you are unsure if you must report more information, call the EPA Emergency Planning and Right-To-Know Hot Line: 800-535-0202 or 202-479-2449.

TOXIC SUBSTANCES CONTROL ACT (TSCA):

The components of this product are contained on the chemical substance inventory list.

OTHER REGULATORY INFORMATION:

D.O.T. Shipping Name:

Not Regulated by D.O.T.

The information herein is given in good faith, but no warranty expressed or implied is made. NOVOC Performance Resins, LLC urges suppliers and users of this product to evaluate its suitability and compliance with local regulations as NOVOC Performance Resins, LLC cannot foresee the nature of the final application nor final location of usage.