
Safety Data Sheet

Forsch Polymer

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : AMN 440B

Product Use Description : Epoxy, Curing Agent

Manufacturer/Distributor : Forsch Polymer Corp.
3025 S. Wyandot St.
Englewood, CO.80110

Telephone/email : 303-322-9611
Bill@forschpolymer.com
James@forschpolymer.com

Emergency telephone number : 303-548-7716

2. HAZARDS IDENTIFICATION

GHS classification

Skin corrosion - Category 1B
Serious Eye Damage - Category 1
Skin sensitization - Category 1

GHS label elements

Hazard pictograms/symbols



Signal Word: Danger

Hazard Statements:

H314: Causes severe skin burns and eye damage.
H317: May cause an allergic skin reaction.

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Precautionary Statements:	: P261:Avoid breathing dust/fume/gas/mist/vapours/spray.
Prevention	P264:Wash hands thoroughly after handling. P280: Wear protective gloves/protective clothing/eye protection/face protection.
Response	P301+P330+P331 :IF SWALLOWED: rinse mouth. Do NOT induce vomiting. P303+P361+P353 :IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. P305+P351+P338 :IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 :Get medical advice/attention. P333+P313 :If skin irritation or rash occurs: Get medical advice/attention. P363 :Wash contaminated clothing before reuse.
Disposal	: P501:Disposal of contents/container to be specified in accordance with regulations.

Hazards not otherwise classified

Corrosive
Severe eye irritant.
Severe respiratory irritant.
Severe skin irritant.
May cause sensitization by skin contact.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS Number	Concentration (Weight)
Tofa, reaction products with TEPA	68953-36-6	> 85%
Tetraethylenepentamine	112-57-2	< 15

CHEMICAL FAMILY: Amidoamine.

4. FIRST AID MEASURES

General advice	: Seek medical advice. If breathing has stopped or is labored, give assisted respirations. Supplemental oxygen may be indicated. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation immediately.
Eye contact	: Hold eyelids apart, initiate and maintain gentle and continuous irrigation until the patient receives medical care. If medical care is not promptly available, continue to irrigate for one hour.
Skin contact	: Immediately remove contaminated clothing, and any extraneous chemical, if possible to do so without delay. Initiate and maintain continuous irrigation until the patient receives medical care. If medical care is not promptly available,

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	continue to irrigate for one hour. Cover wound with sterile dressing. Take off contaminated clothing and shoes immediately.
Ingestion	: Do not induce vomiting without medical advice. If a person vomits when lying on his back, place him in the recovery position. Never give anything by mouth to an unconscious person. Prevent aspiration of vomit. Turn victim's head to the side.
Inhalation	: If breathing has stopped or is labored, give assisted respirations. Supplemental oxygen may be indicated. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation immediately. Move to fresh air.
Most important symptoms/effects - acute and delayed	: Repeated and/or prolonged exposure to low concentrations of vapors and/or aerosols may cause: Sore throat. Eye disease. Skin disorders and Allergies. Asthma.
Immediate Medical Attention and Special Treatment	
Treatment	NOTE TO PHYSICIANS: Application of corticosteroid cream has been effective in treating skin irritation.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	: Alcohol-resistant foam. Carbon dioxide (CO ₂). Dry chemical. Dry sand. Limestone powder.
Specific hazards	: Ammonia gas may be liberated at high temperatures. In case of incomplete combustion an increased formation of oxides of nitrogen (NO _x) is to be expected. Incomplete combustion may form carbon monoxide. May generate ammonia gas. May generate toxic nitrogen oxide gases. Burning produces noxious and toxic fumes. Downwind personnel must be evacuated.
Special protective equipment for fire-fighters	: Avoid contact with the skin. A face shield should be worn. Use personal protective equipment. Wear self contained breathing apparatus for fire fighting if necessary.
Further information	: Do not allow run-off from fire fighting to enter drains or water courses., Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures	: Wear suitable protective clothing, gloves and eye/face protection. Use self-contained breathing apparatus and chemically protective clothing. Evacuate personnel to safe areas.
Environmental precautions	: Construct a dike to prevent spreading.
Methods for cleaning up	: Contact Air Products' Emergency Response Center for advice. Approach

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suspected leak areas with caution. Place in appropriate chemical waste container.

Additional advice : Open enclosed spaces to outside atmosphere. If possible, stop flow of product.

7. HANDLING AND STORAGE

Handling

Do not use sodium nitrite or other nitrosating agents in formulations containing this product. Suspected cancer-causing nitrosamines could be formed. Use only in well-ventilated areas. Avoid breathing vapors and/or aerosols. Avoid contact with skin and eyes. Emergency showers and eye wash stations should be readily accessible. Adhere to work practice rules established by government regulations. Avoid contact with eyes. Use personal protective equipment. When using, do not eat, drink or smoke.

Storage

Product may partially freeze with extended exposure to cold temperatures, resulting in crystallization, haziness or separation. If this occurs, product should be warmed to 100-140F (38-60C) for one hour and stirred until clear. Do not store near acids. Keep containers tightly closed in a dry, cool and well-ventilated place.

Technical measures/Precautions

Do not store in reactive metal containers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures

Provide readily accessible eye wash stations and safety showers.
Provide natural or explosion-proof ventilation adequate to ensure concentrations are kept below exposure limits.

Personal protective equipment

Respiratory protection : Wear appropriate respirator when ventilation is inadequate.

Hand protection : Butyl-rubber
Nitrile rubber.
Neoprene gloves.
Impervious gloves.
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.

Eye protection : Full face shield with goggles underneath.
Chemical resistant goggles must be worn.

Skin and body protection : Impervious clothing.
Full rubber suit (rain gear).
Rubber or plastic boots.
Long sleeve shirts and trousers without cuffs.

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Slicker Suit.

Special instructions for protection and hygiene

: Discard contaminated leather articles. Wash hands at the end of each workshift and before eating, smoking or using the toilet. Provide readily accessible eye wash stations and safety showers.

Exposure limit(s)

Tetraethylenepentamine

Time Weighted Average (TWA): WEEL

1 ppm

5 mg/m³

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Liquid. Amber.
Odor	: Ammoniacal.
Odor threshold	: No data available.
pH	: Alkaline.
Melting point/range	: No data available.
Boiling point/range	: > 392°F (> 200 °C)
Flash point	: 383 F (195°C)
Evaporation rate	: No data available.
Flammability (solid, gas)	: Not applicable.
Upper/lower explosion/flammability limit	: Not applicable.
Vapor pressure	: < 20.68 mmHg at 70 °F (21°C)
Water solubility	: No data available.
Relative vapor density	: Not applicable.
Relative density	: 0.95 (water = 1)
Partition coefficient (n-octanol/water)	: No data available.
Auto-ignition temperature	: No data available.
Decomposition temperature	: No data available.

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Viscosity	: No data available.
Molecular Weight	: No data available.
Density	: 59.307 lb/ft3 (0.95 g/cm3) at 70 F (21 t)

10. STABILITY AND REACTIVITY

Chemical Stability	: Stable under normal conditions.
Conditions to avoid	: No data available.
Materials to avoid	: CAUTION! N-Nitrosamines, many of which are known to be potent carcinogens, may be formed when the product comes in contact with nitrous acid, nitrites or atmospheres with high nitrous oxide concentrations. Nitrous acid and other nitrosating agents. Organic acids (i.e. acetic acid, citric acid etc.). Mineral acids. Sodium hypochlorite. Product slowly corrodes copper, aluminum, zinc and galvanized surfaces. Reaction with peroxides may result in violent decomposition of peroxide possibly creating an explosion. Oxidizing agents.
Hazardous decomposition products	: Nitric acid. Ammonia Nitrogen oxides (NOx). Nitrogen oxide can react with water vapors to form corrosive nitric acid. Carbon monoxide. Carbon dioxide (CO2). Nitrosamine.
Possibility of hazardous Reactions/Reactivity	: No data available.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Likely routes of exposure

Effects on Eye	: Causes eye burns. May cause blindness. Severe eye irritation.
Effects on Skin	: Causes skin burns.
Inhalation Effects	: Harmful if inhaled and may cause delayed lung injury. Can cause severe eye, skin and respiratory tract burns. Risk of serious damage to the lungs (by inhalation). May cause nose, throat, and lung irritation. Inhalation of aerosol may cause irritation to the upper respiratory tract. Inhalation of vapors and/or aerosols in high concentration may cause irritation of respiratory system.

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Ingestion Effects : If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.

Symptoms : Repeated and/or prolonged exposure to low concentrations of vapors and/or aerosols may cause: Sore throat. Eye disease., Skin disorders and Allergies., Asthma.

Acute toxicity

Acute Oral Toxicity LD50 : 4,750 mg/kg Species : Rat.

Inhalation : No data is available on the product itself.

Acute Dermal Toxicity : LD50 : 8,550 mg/kg Species : Rat.

Skin corrosion/irritation : Severe skin irritation.

Serious eye damage/eye irritation : Severe eye irritation.

Sensitization. : Causes sensitization on guinea-pigs. May cause sensitization by skin contact.

Chronic toxicity or effects from long term exposures

Carcinogenicity : No data available.

Reproductive toxicity : No data is available on the product itself. :

Germ cell mutagenicity No data is available on the product itself. No

Specific target organ systemic toxicity (single exposure) data available.

Specific target organ systemic toxicity (repeated exposure) : No data available.

Aspiration hazard : No data available.

Delayed and Immediate Effects and Chronic Effects from Short and Long Term Exposure

This product contains no listed carcinogens according to IARC, ACGIH, NTP and/or OSHA in concentrations of 0.1 percent or greater. Prolonged contact may result in chemical burns and permanent damage., May cause allergic skin reaction. Eye disease., Skin disorders and Allergies., Asthma.

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12. ECOLOGICAL INFORMATION

Ecotoxicity effects

Aquatic toxicity : No data is available on the product itself.

Toxicity to other organisms : No data available.

Persistence and degradability

Biodegradability : No data is available on he product itself

Mobility : No data available.

Bioaccumulation : No data is available on the product itself.

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products : Contact supplier if guidance is required.

Contaminated_ packaging : Dispose of container and unitsPd contents in accordance with federal, state, and local requirements.

14. TRANSPORT INFORMATION

DOT

MID No. : UN2735
Proper shipping name : Amines, liquid, corrosive, mils., (Polyamidoamine, Aliphatic amine)
Class or Division : 8
Packing group : III
Labe I (s) : 8
Marine Pollutant : No

IATA

UN/ID No. : UN2735
Proper shipping name : Amines, liquid, corrosive, n.o.s., (Polyamidoamine, Aliphatic amine)
Class or Division : 8
Packing- group :
Label(s) : 8
Marine Pollutant : Yes

** NOTE: This product contains a substance that: 1) is regulated as a Marine Pollutant, or 2) meets the

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definition of toxic to the aquatic environment.

IMDG

UN/ID No. : UN2735
Proper shipping name : AMINES, LIQUID, CORROSIVE, N.O.S., (Polyamideamine, Aliphatic amine)
Class or Division : 8
Packing group : III
Label(s) : 8
Marine Pollutant : Yes

** NOTE This product contains a substance that 1) is regulated as a Marine Pollutant, or 2) meets the definition of toxic to the aquatic environment.

T D G

UN/ID No. : UN2735
Proper shipping name : AMINES, LIQUID, CORROSIVE, N.O.S., (Polyamidoamine, Aliphatic amine)
Class or Division : 8
Packing group : III
Label(s) : 8
Marine Pollutant : No

Further Information

The transportation information is not intended to convey all specific regulatory data relating to this material. For complete transportation information, contact a Forsch Polymer customer service representative.

15. REGULATORY INFORMATION

Toxic Substance Control Act (TSCA) 12(b) Component(s):

None.

Country	Regulatory list	Notification
USA	TSCA	Included on Inventory.
EU	EINECS	Included on EINECS inventory or polymer substance, monomers included on EINECS inventory or no longer polymer.
Canada	DSL	Included on Inventory.
Australia	AICS	Included on Inventory.
Japan	ENCS	Included on Inventory.
South Korea	ECL	Included on Inventory.
China	SEPA	Included on Inventory.
Philippines	PICCS	Included on Inventory.

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EPA SARA Title III Section 312 (40 CFR 370) Hazard Classification
Acute Health Hazard

EPA SARA Title III Section 313 (40 CFR 372) Component(s) above 'de minimus' level
None.

US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)

This product does not contain any chemicals known to State of California to cause cancer, birth defects or any other harm.

16. OTHER INFORMATION

HMIS Rating

Health	: 3
Flammability	: 1
Physical hazard	: 0

Prepared by : Forsch Polymer Corporation

Telephone : 1-303-322-9611

Preparation Date : 03/07/2015

For additional information, please visit our Product web site at
www.forschpolymer.com
