


**1. Identification**

<b>Product identifier</b>	<b>PENNTROWEL™ EPOXY HARDENER</b>
<b>Other means of identification</b>	None.
<b>Recommended use</b>	Curing agents, epoxy-like
<b>Recommended restrictions</b>	None known.
<b>Manufacturer/Importer/Supplier/Distributor information</b>	
<b>Company Name</b>	ErgonArmor, a division of Ergon Asphalt & Emulsions, Inc.
<b>Address</b>	2829 Lakeland Drive Jackson, MS 39232 USA
<b>After hours telephone number</b>	1-800-222-7122
<b>Normal work hours telephone number</b>	1-877-982-7667
<b>Website</b>	www.ergonarmor.com
<b>E-mail</b>	sds@ergon.com
<b>Emergency 24-hour telephone number</b>	CHEMTREC: North America 1-800-424-9300 International 1-800-527-3887
<b>Information on operation hours</b>	8:00 a.m. to 5:00 p.m.

**2. Hazard(s) identification**

<b>Physical hazards</b>	Not classified.	
<b>Health hazards</b>	Acute toxicity, oral	Category 4
	Acute toxicity, dermal	Category 4
	Acute toxicity, inhalation	Category 2
	Skin corrosion/irritation	Category 1
	Serious eye damage/eye irritation	Category 1
	Sensitization, skin	Category 1
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
<b>Environmental hazards</b>	Not classified.	
<b>OSHA defined hazards</b>	Not classified.	
<b>Label elements</b>		

**Signal word**

Danger

**Hazard statement**

Harmful if swallowed. Harmful in contact with skin. Fatal if inhaled. Causes severe skin burns and eye damage. Causes serious eye damage. May cause an allergic skin reaction. May cause respiratory irritation.

**Precautionary statement****Prevention**

Avoid breathing dust/fume/gas/mist/vapors/spray. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Do not eat, drink or smoke when using this product. Contaminated work clothing must not be allowed out of the workplace. In case of inadequate ventilation wear respiratory protection.

<b>Response</b>	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation or rash occurs: Get medical advice/attention. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician. Wash contaminated clothing before reuse. Take off contaminated clothing and wash it before reuse. Specific treatment is urgent (see this label).
<b>Storage</b>	Store in a well-ventilated place. Keep container tightly closed. Store locked up.
<b>Disposal</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Hazard(s) not otherwise classified (HNOC)</b>	None known.
<b>Supplemental information</b>	None.

### 3. Composition/information on ingredients

#### Mixtures

Chemical name	Common name and synonyms	CAS number	%
2,2'-IMINODI(ETHYLAMINE)		111-40-0	100

### 4. First-aid measures

<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing is difficult, trained personnel should give oxygen. Do not use mouth-to-mouth method if victim inhaled the substance. Call a physician or poison control center immediately.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water. Immediately remove contaminated clothing. Wash contaminated clothing before reuse. Call a physician or poison control center immediately.
<b>Eye contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Hold eyelids apart, initiate and maintain gentle and continuous irrigation until the patient receives medical care. Call a physician or poison control center immediately.
<b>Ingestion</b>	Rinse mouth thoroughly. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Never give anything by mouth to a victim who is unconscious or is having convulsions. Do not use mouth-to-mouth method if victim ingested the substance. When risk of unconsciousness, place and transport the victim in secured side position. Call a poison control center immediately.
<b>Most important symptoms/effects, acute and delayed</b>	Coughing. Defatting of the skin. Dermatitis. Shortness of breath. May cause allergic skin reaction. May cause severe irritation or burns to the eyes, skin, gastrointestinal tract, and respiratory system. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause redness and pain. May cause skin dryness or cracking.
<b>Indication of immediate medical attention and special treatment needed</b>	Treat symptomatically. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. IF exposed or concerned: Get medical advice/attention. In case of shortness of breath, give oxygen. Keep victim under observation. Show this safety data sheet to the doctor in attendance.

### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Use water fog, alcohol-resistant foam, dry chemical or carbon dioxide (CO2) to extinguish flames. Dry sand. Limestone powder.
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	Incomplete combustion may form carbon monoxide. Burning produces noxious and toxic fumes. May generate ammonia gas.
<b>Special protective equipment and precautions for firefighters</b>	Wear suitable protective equipment. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk. Do not get water inside container.

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Do not touch or walk through spilled material. Ventilate closed spaces before entering them. Ensure adequate ventilation. Avoid inhalation of vapors or mists.

### Methods and materials for containment and cleaning up

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with DRY earth, DRY sand, or other non-combustible material followed with plastic sheet to minimize spreading or contact with rain. Do not get water on spilled substance or inside containers.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills in original containers for re-use. For waste disposal, see section 13 of the SDS.

### Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and storage

### Precautions for safe handling

In case of insufficient ventilation, wear suitable respiratory equipment. Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not get this material in contact with eyes. Do not get this material in contact with skin. Do not get this material on clothing. Use personal protective equipment as required. Wash hands thoroughly after handling. Do not empty into drains.

### Conditions for safe storage, including any incompatibilities

Store locked up. Store in a well-ventilated place. Keep container tightly closed. Store in cool, dry place. Do not store near acids. Store in steel containers preferably located outdoors, above ground, and surrounded by dikes to contain spills or leaks.

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### US. ACGIH Threshold Limit Values

Components	Type	Value
2,2'-IMINODI(ETHYLAMINE) (CAS 111-40-0)	TWA	1 ppm

#### US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
2,2'-IMINODI(ETHYLAMINE) (CAS 111-40-0)	TWA	4 mg/m <sup>3</sup>
		1 ppm

### Biological limit values

No biological exposure limits noted for the ingredient(s).

### Exposure guidelines

#### US - California OELs: Skin designation

2,2'-IMINODI(ETHYLAMINE) (CAS 111-40-0) Can be absorbed through the skin.

#### US - Minnesota Haz Subs: Skin designation applies

2,2'-IMINODI(ETHYLAMINE) (CAS 111-40-0) Skin designation applies.

#### US ACGIH Threshold Limit Values: Skin designation

2,2'-IMINODI(ETHYLAMINE) (CAS 111-40-0) Danger of cutaneous absorption

#### US NIOSH Pocket Guide to Chemical Hazards: Skin designation

2,2'-IMINODI(ETHYLAMINE) (CAS 111-40-0) Can be absorbed through the skin.

### Appropriate engineering controls

Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded. Provide eyewash station and safety shower.

### Individual protection measures, such as personal protective equipment

#### Eye/face protection

Chemical goggles and face shield are recommended.

#### Skin protection

##### Hand protection

Chemical resistant gloves are recommended. If contact with forearms is likely wear gauntlet style gloves. Butyl rubber or Viton gloves are recommended. Neoprene gloves are recommended.

##### Other

Wear appropriate chemical resistant clothing. Use of impervious boots is recommended. Wear an impervious suit.

#### Respiratory protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. During spraying, wear suitable respiratory equipment.

<b>Thermal hazards</b>	Not available.
<b>General hygiene considerations</b>	Do not get in eyes, on skin, on clothing. Wash hands after handling. Keep away from food and drink. Contaminated work clothing should not be allowed out of the workplace. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and chemical properties

<b>Appearance</b>	Amber Liquid
<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>Color</b>	Amber.
<b>Odor</b>	Amine.
<b>Odor threshold</b>	Not available.
<b>pH</b>	12
<b>Melting point/freezing point</b>	Not available.
<b>Initial boiling point and boiling range</b>	404.6 °F (207 °C)
<b>Flash point</b>	210.0 °F (98.9 °C) Pensky-Martens Closed Cup
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	0 - 0.18 hPa @21°C
<b>Vapor density</b>	13.038
<b>Relative density</b>	0.94
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Not available.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	750.2 °F (399 °C) estimated
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Density</b>	0.94 g/cm <sup>3</sup> @21°C

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Avoid high temperatures. Avoid temperatures exceeding the flash point.
<b>Incompatible materials</b>	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.). Incompatible with oxidizing agents. Avoid contact with acids. Product corrodes copper, aluminum, zinc, and galvanized surfaces. Mineral Acid Sodium hypochlorite. Reaction with peroxides may result in violent decomposition of peroxide possibly creating an explosion.
<b>Hazardous decomposition products</b>	Nitric Acid. Carbon dioxide. Nitrogen oxides (NO <sub>x</sub> ). Ammonia. Carbon monoxide. Nitrogen oxide can react with water vapors to form corrosive nitric acid. Nitrosamine.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	Fatal if inhaled. May cause irritation to the respiratory system.
<b>Skin contact</b>	Causes severe skin burns and eye damage. May cause an allergic skin reaction.
<b>Eye contact</b>	Causes serious eye damage.
<b>Ingestion</b>	Harmful if swallowed.

**Symptoms related to the physical, chemical and toxicological characteristics** May cause an allergic skin reaction. May cause severe irritation or burns to the eyes, skin, gastrointestinal tract, and respiratory system. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause redness and pain. Coughing. Repeated exposure may cause skin dryness and cracking. Defatting of the skin. Shortness of breath.

### Information on toxicological effects

**Acute toxicity** Fatal if inhaled. Harmful in contact with skin. Harmful if swallowed.

Product	Species	Test Results
PENNTROWEL™ EPOXY HARDENER		

#### **Acute**

##### **Oral**

LD50	Rat	1080 mg/kg
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Components	Species	Test Results
2,2'-IMINODI(ETHYLAMINE) (CAS 111-40-0)		

#### **Acute**

##### **Oral**

LD50	Rat	1080 mg/kg
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\* Estimates for product may be based on additional component data not shown.

**Skin corrosion/irritation** Causes severe skin burns and eye damage.

**Serious eye damage/eye irritation** Causes serious eye damage.

### Respiratory or skin sensitization

**Respiratory sensitization** Not a respiratory sensitizer.

**Skin sensitization** May cause an allergic skin reaction. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.

**Germ cell mutagenicity** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity** Not classifiable as to carcinogenicity to humans.

#### **IARC Monographs. Overall Evaluation of Carcinogenicity**

Not listed.

#### **OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

Not listed.

#### **US. National Toxicology Program (NTP) Report on Carcinogens**

Not listed.

**Reproductive toxicity** Not classified.

**Specific target organ toxicity - single exposure** Respiratory tract irritation.

**Specific target organ toxicity - repeated exposure** Not available.

**Aspiration hazard** Not available.

**Chronic effects** Prolonged inhalation may be harmful.

## 12. Ecological information

**Ecotoxicity** The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Product	Species	Test Results
PENNTROWEL™ EPOXY HARDENER		
<b>Aquatic</b>		
Fish LC50	Fish	1014, 96 hours
<i>Acute</i>		
Fish LC50	Fish	1014, 96 hours estimated
<b>Components</b>		
<b>Species</b>		
<b>Test Results</b>		
2,2'-IMINODI(ETHYLAMINE) (CAS 111-40-0)		
<b>Aquatic</b>		
<i>Acute</i>		
Fish LC50	Guppy (Poecilia reticulata)	1014, 96 hours

\* Estimates for product may be based on additional component data not shown.

<b>Persistence and degradability</b>	No data is available on the degradability of this product.
<b>Bioaccumulative potential</b>	Not available.
<b>Mobility in soil</b>	Not available.
<b>Other adverse effects</b>	Not available.

### 13. Disposal considerations

<b>Disposal instructions</b>	Dispose of contents/container in accordance with local/regional/national/international regulations. Do not discharge into drains, water courses or onto the ground.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations. Avoid discharge into water courses or onto the ground.
<b>Contaminated packaging</b>	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

### 14. Transport information

#### DOT

<b>UN number</b>	UN2079
<b>UN proper shipping name</b>	Diethylenetriamine ( RQ = 2290)
<b>Transport hazard class(es)</b>	
<b>Class</b>	8
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	8
<b>Packing group</b>	II
<b>Special precautions for user</b>	Not available.
<b>Special provisions</b>	B2, IB2, T7, TP2
<b>Packaging exceptions</b>	154
<b>Packaging non bulk</b>	202
<b>Packaging bulk</b>	242

#### IATA

<b>UN number</b>	UN2079
<b>UN proper shipping name</b>	Diethylenetriamine
<b>Transport hazard class(es)</b>	
<b>Class</b>	8
<b>Subsidiary risk</b>	-
<b>Packing group</b>	II
<b>Environmental hazards</b>	No.
<b>ERG Code</b>	8L
<b>Special precautions for user</b>	Not available.
<b>Other information</b>	
<b>Passenger and cargo aircraft</b>	Allowed with restrictions.
<b>Cargo aircraft only</b>	Allowed with restrictions.

**IMDG**

**UN number** UN2079  
**UN proper shipping name** DIETHYLENETRIAMINE  
**Transport hazard class(es)**  
**Class** 8  
**Subsidiary risk** -  
**Packing group** II  
**Environmental hazards**  
**Marine pollutant** No.  
**EmS** F-A, S-B  
**Special precautions for user** Not available.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not available.

**DOT****IATA; IMDG**

**General information** If shipped below RQ, this product is not subject to hazardous materials regulations.

**15. Regulatory information**

**US federal regulations** All components are on the U.S. EPA TSCA Inventory List.

**Toxic Substances Control Act (TSCA)****TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Not listed.

**SARA 304 Emergency release notification**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

Not listed.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)****SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical** Yes

**Classified hazard categories** Acute toxicity (any route of exposure)  
Skin corrosion or irritation  
Serious eye damage or eye irritation  
Respiratory or skin sensitization  
Specific target organ toxicity (single or repeated exposure)

**SARA 313 (TRI reporting)**

Not regulated.

**Other federal regulations****Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.**US state regulations****California Proposition 65**

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

**16. Other information, including date of preparation or last revision****Issue date** 06-02-2022**Version #** 01**NFPA ratings**  
Health: 3  
Flammability: 1  
Instability: 0**Disclaimer**  
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.**Revision information** This document has undergone significant changes and should be reviewed in its entirety.