

**1. Identification**

**Product identifier** **PENNTROWEL EPOXY HARDENER**  
**Other means of identification** Not available.  
**Recommended use** Not available.  
**Recommended restrictions** None known.

**Manufacturer/Importer/Supplier/Distributor information**

**Manufacturer**

**Company Name** ErgonArmor, a division of Ergon Asphalt & Emulsions, Inc.  
**Address** 2829 Lakeland Drive  
 Jackson, MS 39232  
 USA  
**After hours telephone number** 1-800-222-7122  
**Normal work hours telephone number** 1-877-982-7667  
**Website** www.ergonarmor.com  
**E-mail** sds@ergon.com  
**Emergency 24-hour telephone number** CHEMTREC: North America 1-800-424-9300 International 1-800-527-3887  
**Information on operation hours** 8:00 a.m. to 5:00 p.m.

**2. Hazard(s) identification**

**Physical hazards** Not classified.  
**Health hazards** Acute toxicity, oral Category 4  
 Acute toxicity, dermal Category 4  
 Skin corrosion/irritation Category 1  
 Sensitization, skin Category 1  
 Specific target organ toxicity, single exposure Category 3 respiratory tract irritation  
**Environmental hazards** Not classified.  
**OSHA defined hazards** Not classified.

**Label elements**



**Signal word** Danger  
**Hazard statement** Harmful if swallowed. May cause respiratory irritation. Harmful in contact with skin. May cause an allergic skin reaction. Causes severe skin burns and eye damage.  
**Prevention** Do not breathe dust/fume/gas/mist/vapors. Contaminated work clothing should not be allowed out of the workplace. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Do not eat, drink or smoke when using this product.  
**Response** If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse. 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. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.  
**Storage** Store in a well-ventilated place. Keep container tightly closed. Store away from incompatible materials. Store locked up.  
**Disposal** Dispose of contents/container in accordance with local/regional/national/international regulations.  
**Hazard(s) not otherwise classified (HNOC)** None known.  
**Supplemental information** Not applicable.

### 3. Composition/information on ingredients

#### Mixtures

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

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

### 4. First-aid measures

#### Inhalation

If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Move to fresh air. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician or poison control center immediately. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

#### Skin contact

Remove contaminated clothing. Remove and isolate contaminated clothing and shoes. Immediately flush skin with plenty of water. Wash off with soap and plenty of water. Call a physician or poison control center immediately. For minor skin contact, avoid spreading material on unaffected skin. If skin irritation occurs: Get medical advice/attention. Get medical attention if irritation develops and persists. Wash clothing separately before reuse.

#### Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately. Get medical attention if irritation develops and persists.

#### Ingestion

Never give anything by mouth to a victim who is unconscious or is having convulsions. Rinse mouth thoroughly. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

#### Most important symptoms/effects, acute and delayed

Irritation of eyes and mucous membranes. Prolonged exposure may cause chronic effects. Irritant effects. May cause allergic respiratory reaction. May cause allergic skin reaction.

#### Indication of immediate medical attention and special treatment needed

In case of shortness of breath, give oxygen. Oxygen, if needed. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

#### General information

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

#### Suitable extinguishing media

Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Water spray mist or foam.

#### Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

#### Specific hazards arising from the chemical

Use a water spray to cool fire-exposed containers.

#### Special protective equipment and precautions for firefighters

Wear suitable protective equipment. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

#### Fire-fighting equipment/instructions

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. Avoid skin contact and inhalation of vapors during disposal of spills.

**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**

Prevent further leakage or spillage if safe to do so. No special environmental precautions required. Contact local authorities in case of spillage to drain/aquatic environment. 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. Do not breathe 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.

**8. Exposure controls/personal protection****Occupational exposure limits****US. ACGIH Threshold Limit Values**

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

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

| Components                                 | Type | Value               |
|--|------|---------------------|
| 2,2'-IMINODI(ETHYLAMINE)<br>(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) Can be absorbed through the skin.

**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.

**Individual protection measures, such as personal protective equipment****Eye/face protection**

Avoid contact with eyes. Chemical goggles are recommended. Eye wash fountain is recommended.

**Hand protection**

Chemical resistant gloves are recommended. If contact with forearms is likely wear gauntlet style gloves.

**Other**

Avoid contact with the skin. Chemical resistant gloves. Wear suitable protective clothing.

**Skin protection****Respiratory protection**

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

**Thermal hazards**

Not available.

**General hygiene considerations**

Do not get in eyes. Do not get this material in contact with skin. Wash hands after handling. Keep away from food and drink. Contaminated work clothing should not be allowed out of the workplace. Handle in accordance with good industrial hygiene and safety practice.

**9. Physical and chemical properties****Appearance**

Clear, colorless liquid.

|   |   |
|---|---|
| <b>Physical state</b>                               | Liquid.   |
| <b>Form</b>   | Liquid.   |
| <b>Color</b>  | Colorless.  |
| <b>Odor</b>   | Ammoniacal  |
| <b>Odor threshold</b>                               | Not available.  |
| <b>pH</b>   | 12  |
| <b>Melting point/freezing point</b>                 | -38.2 °F (-39 °C) estimated   |
| <b>Initial boiling point and boiling range</b>      | 404.6 °F (207 °C) estimated   |
| <b>Flash point</b>                                  | 206.1 °F (96.7 °C) Pensky-Martens Closed Cup<br>215.1 °F (101.7 °C) estimated |
| <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>                  | 1   |
| <b>Explosive limit - upper (%)</b>                  | 10  |
| <b>Vapor pressure</b>                               | 0.31 hPa estimated  |
| <b>Vapor density</b>                                | Not available.  |
| <b>Relative density</b>                             | 0.959   |
| <b>Relative density temperature</b>                 | 68 °F (20 °C)   |
| <b>Solubility(ies)</b>                              |   |
| <b>Solubility (water)</b>                           | Not available.  |
| <b>Partition coefficient (n-octanol/water)</b>      | Not available.  |
| <b>Auto-ignition temperature</b>                    | 750.02 °F (398.9 °C) estimated  |
| <b>Decomposition temperature</b>                    | Not available.  |
| <b>Viscosity</b>                                    | Not available.  |

## 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> | This product will autopolymerize at very high temperatures. (>200 deg C)                       |
| <b>Conditions to avoid</b>                | Avoid exposure to high temperatures or direct sunlight.  |
| <b>Incompatible materials</b>             | Incompatible with oxidizing agents. Avoid contact with acids. Halogens. Zinc. Copper Aluminum. |
| <b>Hazardous decomposition products</b>   | Carbon dioxide. Nitrogen oxides (NOx). Sulfur oxides.  |

## 11. Toxicological information

### Information on likely routes of exposure

|                     |  |
|---------------------|--|
| <b>Ingestion</b>    | May cause discomfort if swallowed. Harmful if swallowed. |
| <b>Inhalation</b>   | Irritating to respiratory system.                        |
| <b>Skin contact</b> | Causes skin burns.                                       |
| <b>Eye contact</b>  | Causes serious eye damage.                               |

**Symptoms related to the physical, chemical and toxicological characteristics** Irritating to eyes, respiratory system and skin. Irritating to mouth, throat, and stomach. Irritant effects.

### Information on toxicological effects

**Acute toxicity** Harmful if absorbed through skin or swallowed.

| Product                   | Species | Test Results         |
|---------------------------|---------|----------------------|
| PENNTROWEL EPOXY HARDENER |         |                      |
| <b>Acute</b>              |         |                      |
| <i>Oral</i>               |         |                      |
| LD50                      | Rat     | 1080 mg/kg estimated |

| Product      | Species    | Test Results         |
|--------------|------------|----------------------|
| <i>Other</i> |            |                      |
| LD50         | Guinea pig | 162 mg/kg estimated  |
|              | Mouse      | 71 mg/kg estimated   |
|              | Rabbit     | 1090 mg/kg estimated |
|              | Rat        | 74 mg/kg estimated   |
| Components   | Species    | Test Results         |

#### 2,2'-IMINODI(ETHYLAMINE) (CAS 111-40-0)

##### Acute

###### Oral

LD50 Rat 1080 mg/kg

###### Other

LD50 Guinea pig 162 mg/kg  
 Mouse 71 mg/kg  
 Rabbit 1090 mg/kg  
 Rat 74 mg/kg

\* 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 sensitization by skin contact. 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.

#### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

**Reproductive toxicity** Not classified.

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

**Specific target organ toxicity - repeated exposure** Causes damage to organs. Respiratory system.

**Aspiration hazard** Not available.

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

## 12. Ecological information

**Ecotoxicity** Not expected to be harmful to aquatic organisms.

| Product                   | Species | Test Results                       |
|---------------------------|---------|------------------------------------|
| PENNTROWEL EPOXY HARDENER |         |                                    |
| Fish                      | LC50    | Fish 1014 mg/l, 96 hours estimated |
| Components                | Species | Test Results                       |

#### 2,2'-IMINODI(ETHYLAMINE) (CAS 111-40-0)

##### Aquatic

Fish LC50 Guppy (Poecilia reticulata) 1014 mg/l, 96 hours

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

**Persistence and degradability** No data is available on the degradability of this product.

**Bioaccumulative potential** Not available.

**Mobility in soil** Not available.

**Other adverse effects** 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> | Read safety instructions, SDS and emergency procedures before handling. |
| <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.           |
| <b>Cargo aircraft only</b>          | Allowed.           |

#### IMDG

|                                     |                    |
|-------------------------------------|--------------------|
| <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>        |                    |
| <b>Marine pollutant</b>             | No.                |
| <b>EmS</b>                          | F-A, S-B           |
| <b>Special precautions for user</b> | Not available.     |

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

DOT



IATA; IMDG



## 15. Regulatory information

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

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

Not regulated.

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

Not listed.

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories**

Immediate Hazard - Yes  
Delayed Hazard - No  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312**

No

**Hazardous chemical**

**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**

**US. Massachusetts RTK - Substance List**

2,2'-IMINODI(ETHYLAMINE) (CAS 111-40-0)

**US. New Jersey Worker and Community Right-to-Know Act**

Not regulated.

**US. Pennsylvania RTK - Hazardous Substances**

2,2'-IMINODI(ETHYLAMINE) (CAS 111-40-0)

**US. Rhode Island RTK**

Not regulated.

**US. 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 Chemical Substances (AICS)                     | 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                    |
| 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** 12-17-2015

**Version #** 01

**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.