1. IDENTIFICATION

Product identifier
Product Code S296-0000A
Product Name ENVIRO-GLAZE CLEAR

Other means of identification
Common Name SERIES 296 PART A

Recommended use of the chemical and restrictions on use
Recommended Use industrial paint.
Uses advised against Consumer use, For professional use only. Not for residential use.

Details of the supplier of the safety data sheet
Manufacturer Address Tnemec Company, Inc. 6800 Corporate Drive, Kansas City, MO 64120-1372

Emergency telephone number
Company Phone Number Tnemec Regulatory Dept: 816-474-3400
24 Hour Emergency Phone Number 800-535-5053 (Infotrac)

2. HAZARDS IDENTIFICATION

Classification
OSHA Regulatory Status This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

<table>
<thead>
<tr>
<th>Skin sensitization</th>
<th>Category 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germ cell mutagenicity</td>
<td>Category 1B</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Category 1B</td>
</tr>
<tr>
<td>Reproductive Toxicity</td>
<td>Category 2</td>
</tr>
<tr>
<td>Specific target organ toxicity (repeated exposure)</td>
<td>Category 1</td>
</tr>
</tbody>
</table>

Label elements

EMERGENCY OVERVIEW

Danger

Hazard statements
May cause an allergic skin reaction
May cause genetic defects
May cause cancer
Suspected of damaging fertility or the unborn child
Causes damage to organs through prolonged or repeated exposure
Precautionary Statements

Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Contaminated work clothing should not be allowed out of the workplace
Wear protective gloves
Do not breathe dust/fume/gas/mist/vapors/spray
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product

Response
IF exposed or concerned: Get medical advice/attention
IF ON SKIN: Wash with plenty of soap and water
If skin irritation or rash occurs: Get medical advice/attention
Wash contaminated clothing before reuse

Storage
Store locked up
Keep away from children

Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Other information
May be harmful if swallowed
Causes mild skin irritation
Harmful to aquatic life with long lasting effects
Contains ethylene glycol monobutyl ether which may cause blood damage based on animal data.
SEE SAFETY DATA SHEET

Acute Toxicity 39.5483603 % of the mixture consists of ingredient(s) of unknown toxicity.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHYLENE GLYCOL MONOBUTYL ETHER</td>
<td>111-76-2</td>
<td>1 - 10%</td>
</tr>
<tr>
<td>AROMATIC PETROLEUM DISTILLATE</td>
<td>64742-95-6</td>
<td>1 - 10%</td>
</tr>
<tr>
<td>ALUMINUM OXIDES</td>
<td>1344-28-1</td>
<td>1 - 10%</td>
</tr>
<tr>
<td>1,2,4-Trimethylbenzene</td>
<td>95-63-6</td>
<td>1 - 10%</td>
</tr>
</tbody>
</table>

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures
General advice
If symptoms persist, call a physician.

Eye contact
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.

Skin contact
Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician.

Inhalation
Remove to fresh air. Oxygen or artificial respiration if needed.

Ingestion
If swallowed, do not induce vomiting. Get medical attention immediately.

Self-protection of the first aider
Use personal protective equipment. Avoid contact with eyes, skin and clothing.

Most important symptoms and effects, both acute and delayed

Notes to physician
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Carbon dioxide (CO2), Foam. Dry chemical.

Unsuitable extinguishing media
Water.

Specific hazards arising from the chemical
Thermal decomposition can lead to release of irritating gases and vapours In the event of fire and/or explosion do not breathe fumes

Hazardous combustion products
Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide. Unidentified organic and inorganic compounds. Carbon oxides. Hydrocarbons.

Protective equipment and precautions for firefighters
Use water spray to cool unopened containers. In the event of fire, wear self-contained breathing apparatus. Keep away from heat/sparks/open flames/hot surfaces. MAY CAUSE HEAT AND PRESSURE BUILD-UP IN CLOSED CONTAINERS. Solvent vapors are heavier than air and may spread along floors. Flash back possible over considerable distance.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions
Avoid contact with eyes, skin and clothing. Use personal protective equipment. Remove all sources of ignition.

Environmental Precautions

Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system.

Methods and material for containment and cleaning up

Methods for containment
Remove all sources of ignition. Spills may be collected with inert, absorbent material for proper disposal. Use non-sparking tools, protective gloves, goggles and clothing, adequate ventilation, avoid the breathing of vapors and use respiratory protective devices. Transfer absorbent material to suitable containers for proper disposal.

Methods for cleaning up
If spilled, contain spilled material and remove with inert absorbent. Dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations.
7. HANDLING AND STORAGE

Precautions for safe handling

Handling  Avoid contact with eyes, skin and clothing. Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Do not eat, drink or smoke when using this product. When used in a mixture, read the labels and safety data sheets of all components. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities

Storage  Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children.

Incompatible products  Acids. Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure guidelines

<table>
<thead>
<tr>
<th>Component</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHYLENE GLYCOL MONOBUTYL ETHER</td>
<td>TWA: 20 ppm</td>
<td>TWA: 25 ppm</td>
<td>700 ppm</td>
</tr>
<tr>
<td>111-76-2</td>
<td>TWA: 120 mg/m³</td>
<td>Skin TWA: 50 ppm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TWA: 240 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ALUMINUM OXIDES</td>
<td>TWA: 1 mg/m³</td>
<td>TWA: 10 mg/m³</td>
<td></td>
</tr>
<tr>
<td>1344-28-1</td>
<td>TWA: 5 mg/m³</td>
<td>TWA: 15 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

Appropriate engineering controls

Engineering measures  Sufficient ventilation, in volume and pattern, should be provided through both local and general exhaust to keep the air contaminant concentration below current applicable OSHA Permissible Exposure Limits (PEL) and ACGIH”s Threshold Limit Values (TLV). Appropriate ventilation should be employed to remove hazardous decomposition products formed during welding or flame cutting operations of surfaces coated with this product.

Individual protection measures, such as personal protective equipment

Eye/face protection  Safety glasses with side-shields If splashes are likely to occur, wear face-shield.

Skin and body protection  Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Respiratory protection  Use only with adequate ventilation. Do not breathe vapors, spray mist, or dust. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates vapor/mist or dust levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH/MSHA approved) during and after application. Follow respirator manufacturer’s directions for respirator use.

General hygiene considerations  Handle in accordance with good industrial hygiene and safety practice. Avoid breathing dust created by cutting, sanding, or grinding.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Appearance</th>
<th>Color</th>
<th>Odor</th>
<th>Odor threshold</th>
<th>Odor threshold</th>
</tr>
</thead>
</table>
### Property  | Values | Remarks
---|---|---
**pH** |  | No data available
Melting point / freezing point |  | No data available
Boiling point / boiling range | 100 °C / 212.0 °F | Pensky Martens - Closed Cup
Flash point | 52 °C / 126.0 °F | No data available
Evaporation rate |  | No information available
Flammability (solid, gas) |  | No data available
Flammability Limit in Air
  - Upper flammability limit | N/A | No data available
  - Lower flammability limit | 1.1% | No data available
Vapor pressure |  | No data available
Vapor density |  | No data available
Specific gravity | 1.06281 | g/cm³
Water solubility | Insoluble in cold water | No data available
Solubility in other solvents |  | No data available
Partition coefficient: n-octanol/water |  | No data available
Autoignition temperature |  | No data available
Decomposition temperature |  | No data available
Kinematic viscosity |  | No data available
Dynamic viscosity | 650 centipoises |  

### Other Information

| Property | Values | Remarks |
---|---|---|
Density | 8.84417 lbs/gal |  |
Volatile organic compounds (VOC) content | 1.816 lbs/gal |  |
Total volatiles weight percent | 57.9550 % |  |
Total volatiles volume percent | 62.8759 % |  |

### 10. STABILITY AND REACTIVITY

**Reactivity**
No data available

**Chemical stability**
Stable under recommended storage conditions.

**Possibility of hazardous reactions**
None under normal processing.

**Conditions to avoid**
Heat, flames and sparks.

**Incompatible materials**
Acids, Strong oxidizing agents

**Hazardous decomposition products**

### 11. TOXICOLOGICAL INFORMATION

**Information on Likely Routes of Exposure**

**Inhalation**
May cause central nervous system depression with nausea, headache, dizziness, vomiting, and incoordination.

**Eye contact**
Irritating to eyes.

**Skin contact**
May cause sensitization of susceptible persons.
Ingestion

Harmful if swallowed.

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHYLENE GLYCOL MONOBUTYL ETHER 111-76-2</td>
<td>= 470 mg/kg (Rat)</td>
<td>= 99 mg/kg (Rabbit)</td>
<td>= 450 ppm (Rat) 4 h</td>
</tr>
<tr>
<td>AROMATIC PETROLEUM DISTILLATE 64742-95-6</td>
<td>= 8400 mg/kg (Rat)</td>
<td>&gt; 2000 mg/kg (Rabbit)</td>
<td>= 3400 ppm (Rat) 4 h</td>
</tr>
<tr>
<td>ALUMINUM OXIDES 1344-28-1</td>
<td>&gt; 5000 mg/kg (Rat)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1,2,4-TRIMETHYLBENZENE 95-63-6</td>
<td>= 3280 mg/kg (Rat)</td>
<td>&gt; 3160 mg/kg (Rabbit)</td>
<td>= 18 g/m³ (Rat) 4 h</td>
</tr>
</tbody>
</table>

Information on toxicological effects

Symptoms

Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Skin disorders.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity

NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Contains ethylene glycol monobutyl ether which may cause blood damage based on animal data.

Sensitization

May cause sensitization of susceptible persons.

Mutagenicity

May cause genetic defects.

Carcinogenicity

The table below indicates whether each agency has listed any ingredient as a carcinogen.

<table>
<thead>
<tr>
<th>Component</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHYLENE GLYCOL MONOBUTYL ETHER 111-76-2</td>
<td>A3</td>
<td>Group 3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Reproductive effects

Suspected of damaging fertility or the unborn child.

STOT - single exposure

No information available

STOT - repeated exposure

Causes damage to organs through prolonged or repeated exposure to blood, Central nervous system, Eyes, hematopoietic system, kidney, liver, Lungs, respiratory system, Skin.

Aspiration hazard

Based on product level data, this product does not meet the requirement to be classified as an aspiration hazard. However, this product contains an ingredient that may cause aspiration if swallowed.

Acute Toxicity

39.5483603 % of the mixture consists of ingredient(s) of unknown toxicity.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Harmful to aquatic life with long lasting effects

40.85116 % of the mixture consists of components(s) of unknown hazards to the aquatic environment.

<table>
<thead>
<tr>
<th>Component</th>
<th>Toxicity to algae</th>
<th>Toxicity to fish</th>
<th>Toxicity to daphnia</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHYLENE GLYCOL MONOBUTYL ETHER 111-76-2</td>
<td>2950: 96 h Lepomis macrochirus mg/L LC50 1490: 96 h Lepomis macrochirus mg/L LC50 static</td>
<td>1698 - 1940: 24 h Daphnia magna mg/L EC50 1000: 48 h Daphnia magna mg/L EC50</td>
<td></td>
</tr>
<tr>
<td>AROMATIC PETROLEUM DISTILLATE 64742-95-6</td>
<td>9.22: 96 h Oncorhynchus mykiss mg/L LC50</td>
<td>6.14: 48 h Daphnia magna mg/L EC50</td>
<td></td>
</tr>
<tr>
<td>1,2,4-TRIMETHYLBENZENE 95-63-6</td>
<td>7.19 - 8.28: 96 h Pimephales promelas mg/L LC50 flow-through</td>
<td>6.14: 48 h Daphnia magna mg/L EC50</td>
<td></td>
</tr>
</tbody>
</table>

Persistence and degradability

No information available.
Bioaccumulation
No information available.

Mobility in Environmental Media

<table>
<thead>
<tr>
<th>Component</th>
<th>log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHYLENE GLYCOL MONOBUTYL ETHER</td>
<td>0.81</td>
</tr>
<tr>
<td>1,2,4-TRIMETHYLBENZENE</td>
<td>3.63</td>
</tr>
</tbody>
</table>

Other Adverse Effects
No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal Methods
Keep container tightly closed. If spilled, contain spilled material and remove with inert absorbent. Dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations.

Contaminated packaging
Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

DOT
Proper Shipping Name: paint, water base freezable
Not regulated

IATA
UN/ID no.: 1263
Proper Shipping Name: paint
Hazard Class: 3
Packing Group: III
ERG Code: 366

Additional information
Call TNEMEC Traffic Department - 816-474-3400 for additional information or other modes of Transportation.

15. REGULATORY INFORMATION

International Inventories
TSCA: Complies
DSL/NDSL: Complies
EINECS/ELINCS: Does not comply
ENCS: Complies
IECSC: Complies
KECL: Does not comply
PICCS: Does not comply
AICS: Does not comply

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

**Component** | **HAPS Data**
--- | ---
ETHYLENE GLYCOL MONOBUTYL ETHER | 

**United States of America**

**SARA 313**
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40n of the Code of Federal Regulations, Part 372:

<table>
<thead>
<tr>
<th>Component</th>
<th>SARA 313 - Threshold Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHYLENE GLYCOL MONOBUTYL ETHER - 111-76-2</td>
<td>1.0</td>
</tr>
<tr>
<td>ALUMINUM OXIDES - 1344-28-1</td>
<td>1.0</td>
</tr>
<tr>
<td>1,2,4-TRIMETHYLBENZENE - 95-63-6</td>
<td>1.0</td>
</tr>
</tbody>
</table>

**SARA 311/312 Hazardous**

**Categorization**
- Acute Health Hazard: Yes
- Chronic Health Hazard: Yes
- Fire Hazard: Yes
- Sudden Release of Pressure Hazard: No
- Reactive Hazard: No

**CERCLA**

**United States of America**

**California Prop. 65**
WARNING! This product contains a chemical known in the State of California to cause cancer.

<table>
<thead>
<tr>
<th>Component</th>
<th>California Prop. 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHYLENE GLYCOL MONOBUTYL ETHER - 111-76-2</td>
<td>*</td>
</tr>
</tbody>
</table>

**California SCAQMD Rule 443**
Contains Photochemically Reactive Solvent

**State Right-to-Know**

<table>
<thead>
<tr>
<th>Component</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHYLENE GLYCOL MONOBUTYL ETHER - 111-76-2</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>ALUMINUM OXIDES - 1344-28-1</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>1,2,4-TRIMETHYLBENZENE - 95-63-6</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HMIS (Hazardous Material Information System)</th>
<th>Health</th>
<th>Flammability</th>
<th>Reactivity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2*</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Prepared By: Tnemec Regulatory Dept: 816-474-3400
Revision Date: 20-Feb-2015
Revision Summary: 9 4 5 7 10 8 11 14
Disclaimer
For specific information regarding occupational safety and health standards, please refer to the Code of Federal Regulations, Title 29, Part 1910.
To the best of our knowledge, the information contained herein is accurate. However, neither the Tnemec Company or any of its subsidiaries assume any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist.

End of MSDS
1. IDENTIFICATION

Product identifier
Product Code
S296-0296B
Product Name
ENVIRO-GLAZE CONVERTER

Other means of identification
Common Name
SERIES 296 PART B

Recommended use of the chemical and restrictions on use
Recommended Use
industrial paint.
Uses advised against
Consumer use, For professional use only. Not for residential use.

Details of the supplier of the safety data sheet
Manufacturer Address
Tnemec Company, Inc. 6800 Corporate Drive, Kansas City, MO 64120-1372

Emergency telephone number
Company Phone Number
Tnemec Regulatory Dept: 816-474-3400
24 Hour Emergency Phone Number
800-535-5053 (Infotrac)

2. HAZARDS IDENTIFICATION

Classification
OSHA Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity - Inhalation (Vapors)</td>
<td>Category 4</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Category 2</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Category 2A</td>
</tr>
<tr>
<td>Respiratory sensitization</td>
<td>Category 1</td>
</tr>
<tr>
<td>Skin sensitization</td>
<td>Category 1</td>
</tr>
</tbody>
</table>

Label elements

EMERGENCY OVERVIEW

Danger

Hazard statements
Harmful if inhaled
Causes skin irritation
Causes serious eye irritation
May cause allergy or asthma symptoms or breathing difficulties if inhaled
May cause an allergic skin reaction
Precautionary Statements

Prevention
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection
In case of inadequate ventilation wear respiratory protection
Contaminated work clothing should not be allowed out of the workplace

Response
Get medical advice/attention if you feel unwell
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
IF ON SKIN: Wash with plenty of soap and water
Take off contaminated clothing and wash before reuse
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 experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician

Storage
Keep away from children

Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Other information
SEE SAFETY DATA SHEET
Acute Toxicity
35.8 % of the mixture consists of ingredient(s) of unknown toxicity.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEXAMETHYLENE DIISOCYANATE (HDI) POLYMER</td>
<td>28182-81-2</td>
<td>60 - 100%</td>
</tr>
<tr>
<td>POLYISOCYANATE PREPOLYMER</td>
<td>-</td>
<td>30 - 60%</td>
</tr>
<tr>
<td>HEXAMETHYLENE DIISOCYANATE (HDI) MONOMER</td>
<td>822-06-0</td>
<td>0.1 - 1%</td>
</tr>
</tbody>
</table>

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures

General advice
If symptoms persist, call a physician.
Eye contact
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.

Skin contact
Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician.

Inhalation
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Ingestion
If swallowed, do not induce vomiting. Get medical attention immediately.

Self-protection of the first aider
Use personal protective equipment. Avoid contact with eyes, skin and clothing.

Most important symptoms and effects, both acute and delayed

Notes to physician
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Dry chemical. Carbon dioxide. Foam.

Unsuitable extinguishing media
Water.

Specific hazards arising from the chemical
Thermal decomposition can lead to release of irritating gases and vapours. In the event of fire and/or explosion do not breathe fumes.

Hazardous combustion products

Protective equipment and precautions for firefighters
Use water spray to cool unopened containers. In the event of fire, wear self-contained breathing apparatus. Keep away from heat/sparks/open flames/hot surfaces. MAY CAUSE HEAT AND PRESSURE BUILD-UP IN CLOSED CONTAINERS.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions
Avoid contact with eyes, skin and clothing. Use personal protective equipment. Remove all sources of ignition. Ensure adequate ventilation.

Environmental Precautions

Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system.

Methods and material for containment and cleaning up

Methods for containment
Remove all sources of ignition. Spills may be collected with inert, absorbent material for proper disposal. Use non-sparking tools, protective gloves, goggles and clothing, adequate ventilation, avoid the breathing of vapors and use respiratory protective devices. Transfer absorbent material to suitable containers for proper disposal.

Methods for cleaning up
If spilled, contain spilled material and remove with inert absorbent. Dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations.

7. HANDLING AND STORAGE
Precautions for safe handling

Handling
Use only with adequate ventilation. Avoid contact with eyes, skin and clothing. Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Do not eat, drink or smoke when using this product. When used in a mixture, read the labels and safety data sheets of all components. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities

Storage
Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children.

Incompatible products

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure guidelines

<table>
<thead>
<tr>
<th>Component</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEXAMETHYLENE DIISOCYANATE (HDI) MONOMER 822-06-0</td>
<td>TWA: 0.005 ppm</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Appropriate engineering controls

Engineering measures
Sufficient ventilation, in volume and pattern, should be provided through both local and general exhaust to keep the air contaminant concentration below current applicable OSHA Permissible Exposure Limits (PEL) and ACGIH's Threshold Limit Values (TLV). Appropriate ventilation should be employed to remove hazardous decomposition products formed during welding or flame cutting operations of surfaces coated with this product.

Individual protection measures, such as personal protective equipment

Eye/face protection
Safety glasses with side-shields

Skin and body protection
Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Respiratory protection
INDIVIDUALS WITH LUNG OR BREATHING PROBLEMS OR PRIOR REACTION TO ISOCYANATES MUST NOT BE EXPOSED TO VAPOR OR SPRAY MIST. Do not breathe vapor or spray mist. Wear an appropriate, properly fitted respirator (NIOSH/MSHA approved) during and after application unless air monitoring demonstrates vapor/mist levels are below applicable limits. An airline respirator (TC 19C NIOSH/MSHA) is recommended. A vapor-particulate respirator (TC 23C NIOSH/MSHA) may be appropriate where air monitoring demonstrates vapors are less than ten times the applicable exposure limits and the isocyanate concentration is less than its applicable exposure limit. The use of an air-supplied respirator is mandatory whenever the airborne concentration of isocyanate monomer is unknown.

General hygiene considerations
Handle in accordance with good industrial hygiene and safety practice. Avoid breathing dust created by cutting, sanding, or grinding.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>liquid</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>clear</td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>Odor threshold</td>
<td></td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Property</td>
<td>Values</td>
<td>Remarks</td>
</tr>
</tbody>
</table>
**10. STABILITY AND REACTIVITY**

**Reactivity**
May occur if in contact with moisture, other materials which react with isocyanates, or temperatures above 400 °F.

**Chemical stability**
Stable under recommended storage conditions.

**Possibility of hazardous reactions**
None under normal processing.

**Conditions to avoid**
Heat, flames and sparks.

**Incompatible materials**
Amines, Water, Strong bases, Alcohols, copper

**Hazardous decomposition products**

**11. TOXICOLOGICAL INFORMATION**

**Information on Likely Routes of Exposure**

**Inhalation**
May cause sensitization of susceptible persons. Contains isocyanate monomer. If subject to spray application, engineering and administrative controls must be instituted to maintain an exposure level below .005ppm. If these controls are not adequate, the use of an air-supplied respirator is mandatory.

**Eye contact**
Severely irritating to eyes.

**Skin contact**
May cause sensitization of susceptible persons.
Ingestion

Harmful if swallowed.

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEXAMETHYLENE DIISOCYANATE (HDI) POLYMER 28182-81-2</td>
<td></td>
<td></td>
<td>= 18500 mg/m³ (Rat) 1 h</td>
</tr>
<tr>
<td>HEXAMETHYLENE DIISOCYANATE (HDI) MONOMER 822-06-0</td>
<td>738 mg/kg (Rat)</td>
<td>593 mg/kg (Rabbit)</td>
<td>0.06 mg/L (Rat) 4 h</td>
</tr>
</tbody>
</table>

Information on toxicological effects

Symptoms
Skin disorders. Respiratory disorders.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Chronic Toxicity**
Avoid repeated exposure. Contains isocyanate monomer. If subject to spray application, engineering and administrative controls must be instituted to maintain an exposure level below .005ppm. If these controls are not adequate, the use of an air-supplied respirator is mandatory.

**Sensitization**
May cause sensitization of susceptible persons.

**Mutagenicity**
No information available.

**Carcinogenicity**
There are no known carcinogenic chemicals in this product.

**Reproductive effects**
No information available.

**STOT - single exposure**
No information available.

**STOT - repeated exposure**
No information available.

**Target organ effects**
Respiratory system, Skin.

Acute Toxicity
35.8% of the mixture consists of ingredient(s) of unknown toxicity.

12. ECOLOGICAL INFORMATION

**Ecotoxicity**
99.8% of the mixture consists of components(s) of unknown hazards to the aquatic environment

<table>
<thead>
<tr>
<th>Component</th>
<th>Toxicity to algae</th>
<th>Toxicity to fish</th>
<th>Toxicity to daphnia</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEXAMETHYLENE DIISOCYANATE (HDI) MONOMER 822-06-0</td>
<td>26.1: 96 h Brachydania rerio mg/L LC50 static</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Persistence and degradability**
No information available.

**Bioaccumulation**
No information available.

**Mobility in Environmental Media**
No information available.

**Other Adverse Effects**
No information available

13. DISPOSAL CONSIDERATIONS

**Waste treatment methods**

**Disposal Methods**
Keep container tightly closed. If spilled, contain spilled material and remove with inert absorbent. Dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations.

**Contaminated packaging**
Empty containers should be taken to an approved waste handling site for recycling or disposal.
14. TRANSPORT INFORMATION

**DOT**
Proper Shipping Name: paint in oil

**IATA**
Proper Shipping Name: Not regulated

Additional information: Call TNEMEC Traffic Department - 816-474-3400 for additional information or other modes of Transportation.

15. REGULATORY INFORMATION

<table>
<thead>
<tr>
<th>International Inventories</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA</td>
<td>Complies</td>
</tr>
<tr>
<td>DSL/NDSL</td>
<td>Complies</td>
</tr>
<tr>
<td>EINECS/ELINCS</td>
<td>Complies</td>
</tr>
<tr>
<td>ENCS</td>
<td>Does not comply</td>
</tr>
<tr>
<td>IECSC</td>
<td>Complies</td>
</tr>
<tr>
<td>KECL</td>
<td>Complies</td>
</tr>
<tr>
<td>PICCS</td>
<td>Complies</td>
</tr>
<tr>
<td>AICS</td>
<td>Complies</td>
</tr>
</tbody>
</table>

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA - United States Toxic Substances Control Act Section 8(b) Inventory</td>
<td></td>
</tr>
<tr>
<td>DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List</td>
<td></td>
</tr>
<tr>
<td>EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances</td>
<td></td>
</tr>
<tr>
<td>ENCS - Japan Existing and New Chemical Substances</td>
<td></td>
</tr>
<tr>
<td>IECSC - China Inventory of Existing Chemical Substances</td>
<td></td>
</tr>
<tr>
<td>KECL - Korean Existing and Evaluated Chemical Substances</td>
<td></td>
</tr>
<tr>
<td>PICCS - Philippines Inventory of Chemicals and Chemical Substances</td>
<td></td>
</tr>
<tr>
<td>AICS - Australian Inventory of Chemical Substances</td>
<td></td>
</tr>
</tbody>
</table>

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

**Component**
HEXAMETHYLENE DIISOCYANATE (HDI) MONOMER

**SARA 313**
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and and Title 40n of the Code of Federal Regulations, Part 372:

<table>
<thead>
<tr>
<th>Component</th>
<th>SARA 313 - Threshold Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEXAMETHYLENE DIISOCYANATE (HDI) MONOMER - 822-06-0</td>
<td>1.0</td>
</tr>
</tbody>
</table>

**SARA 311/312 Hazardous**

<table>
<thead>
<tr>
<th>Categorization</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Health Hazard</td>
<td>Yes</td>
</tr>
<tr>
<td>Chronic Health Hazard</td>
<td>Yes</td>
</tr>
<tr>
<td>Fire Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Sudden Release of Pressure Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Reactive Hazard</td>
<td>No</td>
</tr>
</tbody>
</table>

**CERCLA**

<table>
<thead>
<tr>
<th>Component</th>
<th>Hazardous Substances RQs</th>
<th>CERCLA EHS RQs</th>
<th>RQ</th>
</tr>
</thead>
</table>
United States of America

California Prop. 65
None of the ingredients are listed with California Proposition 65.

California SCAQMD Rule 443
Contains Photochemically Reactive Solvent

State Right-to-Know

<table>
<thead>
<tr>
<th>Component</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEXAMETHYLENE DIISOCYANATE (HDI) MONOMER 822-06-0</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NMFA</th>
<th>Health</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>*</td>
</tr>
</tbody>
</table>

| HMIS (Hazardous Material Information System) | | | |
| Health | Flammability | Reactivity |
| 2* | 0 | 1 |

Prepared By Tnemec Regulatory Dept: 816-474-3400
Revision Date 22-Jun-2015
Revision Summary

Disclaimer
For specific information regarding occupational safety and health standards, please refer to the Code of Federal Regulations, Title 29, Part 1910.

To the best of our knowledge, the information contained herein is accurate. However, neither the Tnemec Company or any of its subsidiaries assume any liability whatsoever for the accuracy of completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist.

End of MSDS