SECTION 1: Identification

1.1. Identification
Product name: EP1199 Clear B

1.2. Recommended use and restrictions on use
Recommended use: Epoxy hardener
Restrictions on use: Product for industrial use only

1.3. Supplier
ResinLab, LLC
N109 W13300 Ellsworth Drive
Germantown, WI 53022 - United States
T 1-877-259-1669
msds@resinlab.com - www.resinlab.com

1.4. Emergency telephone number
Emergency number: CHEMTREC:1-800-424-9300 (USA); +1 703-527-3887 (International)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture
GHS US classification
Acute toxicity (oral) Category 4
Skin corrosion/irritation Category 1B
Skin sensitization, Category 1
Reproductive toxicity Category 2
Specific target organ toxicity (repeated exposure) Category 2
Full text of H statements: see section 16

2.2. GHS Label elements, including precautionary statements
GHS US labeling
Hazard pictograms (GHS US):  
Signal word (GHS US): Danger
Hazard statements (GHS US): H302 - Harmful if swallowed
H314 - Causes severe skin burns and eye damage
H317 - May cause an allergic skin reaction
H361 - Suspected of damaging fertility or the unborn child
H373 - May cause damage to organs through prolonged or repeated exposure
Precautionary statements (GHS US): P201 - Observe all precautionary statements and emergency telephone numbers before using. 
P202 - Do not handle until all safety precautions have been read and understood.
P260 - Do not breathe dust/fume/gas/mist/vapors/spray.
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
P264 - Wash hands, forearms and face thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P272 - Contaminated work clothing must not be allowed out of the workplace.
P273 - Do not allow to enter eyes, mouth or wounds.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312 - If swallowed: Call a poison center or doctor if you feel unwell.
P301+P330+P331 - If swallowed: Rinse mouth. Do NOT induce vomiting.
P302+P352 - If on skin: Wash with plenty of water.
P303+P361+P353 - If on skin (or hair). Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P353 - If in EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P333 - If exposed or concerned: Get medical advice/attention.
P310 - Immediately call a poison center or doctor.
P314 - Get medical advice/attention if you feel unwell.
P330 - Rinse mouth.
2.3. Other hazards which do not result in classification
No additional information available

2.4. Unknown acute toxicity (GHS US)
Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances
Not applicable

3.2. Mixtures

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-nonylphenol, branched</td>
<td>(CAS-No.) 84852-15-3</td>
<td>50 – 75</td>
<td>Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Repr. 2, H361 Aquatic Acute 1, H400 Aquatic Chronic 1, H410</td>
</tr>
<tr>
<td>N-(2-Aminoethyl)piperazine</td>
<td>(CAS-No.) 140-31-8</td>
<td>25 - 35</td>
<td>Acute Tox. 3 (Dermal), H311 Skin Cor. 1B, H314 Skin Sens. 1, H317 Repr. 2, H361 Aquatic Acute 3, H402 Aquatic Chronic 3, H412</td>
</tr>
<tr>
<td>Diethylenetriamine</td>
<td>(CAS-No.) 111-40-0</td>
<td>1 – 5</td>
<td>Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation: dust, mist), H332 Skin Corr. 1, H314 Skin Sens. 1, H317 STOT SE 3, H335 STOT RE 2, H373 Aquatic Acute 3, H402</td>
</tr>
</tbody>
</table>

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : IF exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact : In case of contact, immediately rinse eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
First-aid measures after ingestion : Rinse mouth. Do not induce vomiting. Get immediate medical advice/attention.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after skin contact : Burns. May cause an allergic skin reaction.
Symptoms/effects after eye contact : Serious damage to eyes.
Symptoms/effects after ingestion : Burns.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media


5.2. Specific hazards arising from the chemical
5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures: Evacuate area.

6.1.1. For non-emergency personnel

Emergency procedures: Ventilate spillage area. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapors/spray.

6.1.2. For emergency responders

Protective equipment: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: “Exposure controls/personal protection”.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up: Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.

Other information: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling: Ensure good ventilation of the work station, ventilate curing ovens to prevent emissions in the workplace. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapors/spray.

Hygiene measures: Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store locked up. Store in a well-ventilated place. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>EP1199 Clear B</th>
<th>Local name</th>
<th>Diethylenetriamine</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td></td>
<td>Diethylenetriamine</td>
</tr>
<tr>
<td>ACGIH</td>
<td>ACGIH OEL TWA [ppm]</td>
<td>1 ppm</td>
</tr>
<tr>
<td>ACGIH</td>
<td>Remark (ACGIH)</td>
<td>TLV® Basis: URT &amp; eye irr. Notations: Skin</td>
</tr>
<tr>
<td>ACGIH</td>
<td>Regulatory reference</td>
<td>ACGIH 2020</td>
</tr>
</tbody>
</table>

4-nonylphenol, branched (84852-15-3)
Not applicable

N-(2-Aminoethyl)piperazine (140-31-8)
Not applicable

Diethylenetriamine (111-40-0)

<table>
<thead>
<tr>
<th>EP1199 Clear B</th>
<th>Local name</th>
<th>Diethylenetriamine</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td></td>
<td>Diethylenetriamine</td>
</tr>
<tr>
<td>ACGIH</td>
<td>ACGIH OEL TWA [ppm]</td>
<td>1 ppm</td>
</tr>
<tr>
<td>ACGIH</td>
<td>Remark (ACGIH)</td>
<td>TLV® Basis: URT &amp; eye irr. Notations: Skin</td>
</tr>
<tr>
<td>ACGIH</td>
<td>Regulatory reference</td>
<td>ACGIH 2020</td>
</tr>
</tbody>
</table>
8.2. Appropriate engineering controls

Appropriate engineering controls: Ensure good ventilation of the work station, ventilate curing ovens to prevent emissions in the workplace.

Environmental exposure controls: Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection: Protective gloves

Eye protection: Safety glasses with side shields

Skin and body protection: Wear suitable protective clothing

Respiratory protection: In case of inadequate ventilation, wear respiratory protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Clear light yellow</td>
</tr>
<tr>
<td>Odor</td>
<td>Amine-like</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>222 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt; 93 °C</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Density</td>
<td>0.97 g/cm³</td>
</tr>
<tr>
<td>Solubility</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient n-octanol/water (Log Pow)</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
<tr>
<td>VOC content</td>
<td>No data available</td>
</tr>
</tbody>
</table>

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.
### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

### 10.5. Incompatible materials


### 10.6. Hazardous decomposition products

Carbon oxides (CO, CO2). Nitrogen oxides.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

<table>
<thead>
<tr>
<th>Acute toxicity (oral)</th>
<th>Harmful if swallowed.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity (dermal)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Acute toxicity (inhalation)</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

**4-nonylphenol, branched (84852-15-3)**

| LD50 oral rat | 1412 mg/kg body weight (Other, Rat, Male / female, Experimental value, Oral) |
| ATE US (oral) | 1412 mg/kg body weight |

**N-(2-Aminoethyl)piperazine (140-31-8)**

| LD50 oral rat | 2097 mg/kg body weight (Rat, Male, Experimental value, Oral, 14 day(s)) |
| ATE US (oral) | 2097 mg/kg body weight |

**Diethylenetriamine (111-40-0)**

| LD50 oral rat | 1553 mg/kg body weight (Rat, Male, Experimental value, Oral, 14 day(s)) |
| ATE US (oral) | 1553 mg/kg body weight |

| LD50 dermal rat | 1045 mg/kg body weight (Rabbit, Experimental value, Dermal) |
| ATE US (dermal) | 1045 mg/kg body weight |

| LC50 Inhalation - Rat | 70 mg/m³ |
| LC50 Inhalation - Rat [ppm] | 16.4 ppm/4h |
| ATE US (gases) | 16.4 ppmV/4h |
| ATE US (vapors) | 0.07 mg/l/4h |
| ATE US (dust, mist) | 0.07 mg/l/4h |

Skin corrosion/irritation: Causes severe skin burns.

Serious eye damage/irritation: Assumed to cause serious eye damage

Respiratory or skin sensitization: May cause an allergic skin reaction.

Germ cell mutagenicity: Not classified

Carcinogenicity: Not classified

Reproductive toxicity: Suspected of damaging fertility or the unborn child.

STOT-single exposure: Not classified

### Diethylenetriamine (111-40-0)

STOT-single exposure: May cause respiratory irritation.

STOT-repeated exposure: May cause damage to organs through prolonged or repeated exposure.

### 4-nonylphenol, branched (84852-15-3)

**LOAEL (oral,rat,90 days)**

400 mg/kg body weight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)
4-nonylphenol, branched (84852-15-3)

**NOAEL (oral, rat, 90 days)**

100 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)

**Diethylenetriamine (111-40-0)**

**LOAEL (oral, rat, 90 days)**


**NOAEL (oral, rat, 90 days)**


**STOT-repeated exposure**

May cause damage to organs through prolonged or repeated exposure.

**Aspiration hazard**

Not classified

**Symptoms/effects after skin contact**

Burns. May cause an allergic skin reaction.

**Symptoms/effects after eye contact**

Serious damage to eyes.

**Symptoms/effects after ingestion**

Burns.

**SECTION 12: Ecological information**

12.1. Toxicity

Ecology - general

Before neutralisation, the product may represent a danger to aquatic organisms.

**4-nonylphenol, branched (84852-15-3)**

**LC50 - Fish [1]**

0.08 mg/l (ASTM E729-96, 96 h, Hybopsis monacha, Static system, Fresh water, Experimental value, Nominal concentration)

**EC50 - Crustacea [1]**

0.084 mg/l (ASTM E729-88, 48 h, Daphnia magna, Semi-static system, Fresh water, Experimental value)

**NOEC chronic fish**

0.006 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri) Duration: '91 d'

**N-(2-Aminoethyl)piperazine (140-31-8)**

**LC50 - Fish [1]**

2190 mg/l (96 h, Pimephales promelas, Static system, Fresh water, Experimental value)

**EC50 - Crustacea [1]**

58 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Experimental value, GLP)

**ErC50 algae**

> 1000 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Fresh water, Experimental value, GLP)

**Diethylenetriamine (111-40-0)**

**LC50 - Fish [1]**

430 mg/l (EU Method C.1, 96 h, Poecilia reticulata, Semi-static system, Fresh water, Experimental value, GLP)

**EC50 - Crustacea [1]**

64.6 mg/l (EU Method C.2, 48 h, Daphnia magna, Static system, Experimental value, GLP)

**EC50 - Crustacea [2]**

16 mg/l Test organisms (species): Daphnia magna

**ErC50 algae**

1164 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Selenastrum capricornutum, Static system, Fresh water, Experimental value, GLP)

**LOEC (chronic)**

11.3 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

**NOEC (chronic)**

5.6 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

**NOEC chronic fish**

> 10 mg/l Test organisms (species): Gasterosteus aculeatus Duration: '28 d'

12.2. Persistence and degradability

**4-nonylphenol, branched (84852-15-3)**


**N-(2-Aminoethyl)piperazine (140-31-8)**

Persistence and degradability: Not readily biodegradable in water.

Chemical oxygen demand (COD) 0.56 g O₂/g substance

**Diethylenetriamine (111-40-0)**

Persistence and degradability: Readily biodegradable in the soil. Readily biodegradable in water.

12.3. Bioaccumulative potential

**4-nonylphenol, branched (84852-15-3)**

BCF - Fish [1]

1200 – 1300 (OECD 305: Bioconcentration: Flow-Through Fish Test, 16 day(s), Gasterosteus aculeatus, Flow-through system, Salt water, Experimental value, Fresh weight)
4-nonylphenol, branched (84852-15-3)

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partition coefficient n-octanol/water (Log Pow)</td>
<td>5.4 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 23 °C)</td>
</tr>
<tr>
<td>Bioaccumulative potential</td>
<td>Potential for bioaccumulation (500 ≤ BCF ≤ 5000).</td>
</tr>
</tbody>
</table>

N-(2-Aminoethyl)piperazine (140-31-8)

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCF - Fish [1]</td>
<td>0.3 – 6.3 (OECD 305: Bioconcentration: Flow-Through Fish Test, 6 week(s), Cyprinus carpio, Flow-through system, Fresh water, Read-across)</td>
</tr>
<tr>
<td>Partition coefficient n-octanol/water (Log Pow)</td>
<td>-1.48 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 20 °C)</td>
</tr>
<tr>
<td>Bioaccumulative potential</td>
<td>Not bioaccumulative.</td>
</tr>
</tbody>
</table>

Diethylenetriamine (111-40-0)

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCF - Fish [1]</td>
<td>0.3 – 6.3 (OECD 305: Bioconcentration: Flow-Through Fish Test, 8 week(s), Cyprinus carpio, Flow-through system, Fresh water, Experimental value, Fresh weight)</td>
</tr>
<tr>
<td>Partition coefficient n-octanol/water (Log Pow)</td>
<td>-1.58 (Calculated, 20 °C)</td>
</tr>
<tr>
<td>Bioaccumulative potential</td>
<td>Not bioaccumulative.</td>
</tr>
</tbody>
</table>

12.4. Mobility in soil

4-nonylphenol, branched (84852-15-3)

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partition coefficient n-octanol/water (Log Koc)</td>
<td>4.35 – 5.69 (log Koc, Other, Experimental value, GLP)</td>
</tr>
<tr>
<td>Ecology - soil</td>
<td>Adsorbs into the soil.</td>
</tr>
</tbody>
</table>

N-(2-Aminoethyl)piperazine (140-31-8)

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partition coefficient n-octanol/water (Log Koc)</td>
<td>4.57 (log Koc, Read-across, GLP)</td>
</tr>
<tr>
<td>Ecology - soil</td>
<td>Low potential for mobility in soil.</td>
</tr>
</tbody>
</table>

Diethylenetriamine (111-40-0)

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partition coefficient n-octanol/water (Log Koc)</td>
<td>3.4 – 4.6 (log Koc, Other, Experimental value, GLP)</td>
</tr>
</tbody>
</table>

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description (DOT) : UN3267 Corrosive liquid, basic, organic, n.o.s. (4-nonylphenol, branched ; N-(2-Aminoethyl)piperazine), 8, III

UN-No.(DOT) : UN3267

Proper Shipping Name (DOT) : Corrosive liquid, basic, organic, n.o.s.

Class (DOT) : 8 - Class 8 - Corrosive material 49 CFR 173.136

Packing group (DOT) : III - Minor Danger

Hazard labels (DOT) : 8 - Corrosive

Dangerous for the environment : Yes
Marine pollutant: Yes

DOT Packaging Non Bulk (49 CFR 173.xxx): 203
DOT Packaging Bulk (49 CFR 173.xxx): 241
DOT Special Provisions (49 CFR 172.102): IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = 97 / 1 + a (tr - tf) Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.
TP28 - A portable tank having a minimum test pressure of 2.65 bar (265 kPa) may be used provided the calculated test pressure is 2.65 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.

DOT Packaging Exceptions (49 CFR 173.xxx): 154
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27): 5 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75): 60 L

DOT Vessel Stowage Location: A - The material may be stowed “on deck” or “under deck” on a cargo vessel and on a passenger vessel.
DOT Vessel Stowage Other: 40 - Stow “clear of living quarters”. 52 - Stow “separated from” acids
Emergency Response Guide (ERG) Number: 153
Other information: No supplementary information available.

Transportation of Dangerous Goods
Not applicable

Transport by sea
Transport document description (IMDG): UN 3267 CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (4-nonylphenol, branched ; N-(2-Aminoethyl)piperazine), 8, III
UN-No. (IMDG): 3267
Class (IMDG): 8 - Corrosive substances
Packing group (IMDG): III - substances presenting low danger
Limited quantities (IMDG): 5 L
Marine pollutant: Yes

Air transport
Transport document description (IATA): UN 3267 Corrosive liquid, basic, organic, n.o.s. (4-nonylphenol, branched ; N-(2-Aminoethyl)piperazine), 8, III
UN-No. (IATA): 3267
Proper Shipping Name (IATA): Corrosive liquid, basic, organic, n.o.s.
4-nonylphenol, branched ; N-(2-Aminoethyl)piperazine
Class (IATA): 8 - Corrosives
SECTION 15: Regulatory information

15.1. US Federal regulations

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-nonylphenol, branched</td>
<td>84852-15-3</td>
<td>50 – 75%</td>
</tr>
</tbody>
</table>

4-nonylphenol, branched (84852-15-3)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Subject to reporting requirements of United States SARA Section 313

EPA TSCA Regulatory Flag
SP - SP - indicates a substance that is identified in a proposed Significant New Use Rule.

N-(2-Aminoethyl)piperazine (140-31-8)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Diethylenetriamine (111-40-0)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

4-nonylphenol, branched (84852-15-3)
Listed on the Canadian DSL (Domestic Substances List)

N-(2-Aminoethyl)piperazine (140-31-8)
Listed on the Canadian DSL (Domestic Substances List)

Diethylenetriamine (111-40-0)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations
Contains the following REACH ingredient(s): 4-Nonylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof] (EC 284-325-5, CAS 84852-15-3)

National regulations
No additional information available

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

<table>
<thead>
<tr>
<th>Component</th>
<th>State or local regulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-(2-Aminoethyl)piperazine(140-31-8)</td>
<td>U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List</td>
</tr>
<tr>
<td>Diethylenetriamine(111-40-0)</td>
<td>U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List</td>
</tr>
</tbody>
</table>

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Full text of H-phrases:

<table>
<thead>
<tr>
<th>H-number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H302</td>
<td>Harmful if swallowed</td>
</tr>
<tr>
<td>H311</td>
<td>Toxic in contact with skin</td>
</tr>
<tr>
<td>H312</td>
<td>Harmful in contact with skin</td>
</tr>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage</td>
</tr>
<tr>
<td>H317</td>
<td>May cause an allergic skin reaction</td>
</tr>
<tr>
<td>H332</td>
<td>Harmful if inhaled</td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation</td>
</tr>
<tr>
<td>H361</td>
<td>Suspected of damaging fertility or the unborn child</td>
</tr>
<tr>
<td>H373</td>
<td>May cause damage to organs through prolonged or repeated exposure</td>
</tr>
<tr>
<td>H400</td>
<td>Very toxic to aquatic life</td>
</tr>
<tr>
<td>H402</td>
<td>Harmful to aquatic life</td>
</tr>
<tr>
<td>H410</td>
<td>Very toxic to aquatic life with long lasting effects</td>
</tr>
<tr>
<td>H412</td>
<td>Harmful to aquatic life with long lasting effects</td>
</tr>
</tbody>
</table>

NFPA health hazard: 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

NFPA fire hazard: 1 - Materials that must be preheated before ignition can occur.

NFPA reactivity: 0 - Material that in themselves are normally stable, even under fire conditions.

Hazard Rating
Health: 2 Moderate Hazard - Temporary or minor injury may occur
Flammability: 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)
Physical: 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

SDS US - ResinLab
This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.