

# PRO-SET® HTP-285 Hardener

## Safety Data Sheet

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015

Issue date: 1/15/2019  
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Version: HTP-285-2022a

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
Product name : PRO-SET® HTP-285 Hardener  
Product code : HTP-285, HTP-285-1, HTP-285-2, HTP-285-4  
Chemical family : Polyamine-imidazole mixture.

#### 1.2. Recommended use and restrictions on use

Use of the substance/mixture : Curing agent for epoxy resins  
Restrictions on use : None

#### 1.3. Supplier

| Manufacturer   | Distributor |
|--|-------------|
| Gougeon Brothers, Inc<br>100 Patterson Ave.<br>Bay City, MI 48706 - U.S.A.<br>T 888-377-6738 or 989-684-7286<br><a href="http://www.prosetepoxy.com">www.prosetepoxy.com</a> |             |

#### 1.4. Emergency telephone number

Emergency number : CHEMTREC 1 (800) 424-9300  
CHEMTREC International +1 (703) 527-3887 24 hr

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS classification

Acute Tox. 4 (Oral)  
Acute Tox. 4 (Dermal)  
Skin Corr. 1B  
Eye Dam. 1  
Skin Sens. 1  
Carc. 2  
STOT SE 3  
STOT RE 2  
Aquatic Acute 2  
Aquatic Chronic 2

#### 2.2. GHS Label elements, including precautionary statements

##### GHS labelling

Hazard pictograms (GHS) :



Signal word (GHS) :

Danger

Hazard statements (GHS) :

Harmful if swallowed or in contact with skin  
Causes severe skin burns and eye damage.  
May cause an allergic skin reaction.

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|                                |  |
|--------------------------------|--|
| Precautionary statements (GHS) | <p>May cause respiratory irritation.<br/>Suspected of causing cancer.<br/>May cause damage to organs through prolonged or repeated exposure (oral).<br/>Toxic to aquatic life<br/>Toxic to aquatic life with long lasting effects.<br/>: Obtain special instructions before use.<br/>Do not handle until all safety precautions have been read and understood.<br/>Do not breathe dust/fume/gas/mist/vapours/spray.<br/>Wash hands, forearms and face thoroughly after handling.<br/>Do not eat, drink or smoke when using this product<br/>Use only outdoors or in a well-ventilated area.<br/>Contaminated work clothing must not be allowed out of the workplace.<br/>Avoid release to the environment.<br/>Wear protective gloves/protective clothing/eye protection/face protection.<br/>If exposed or concerned: Get medical advice/attention.<br/>If swallowed: rinse mouth. Do NOT induce vomiting.<br/>If inhaled: Remove person to fresh air and keep comfortable for breathing.<br/>Call a poison center or doctor if you feel unwell.<br/>If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.<br/>Wash contaminated clothing before reuse.<br/>If skin irritation or rash occurs: Get medical advice/attention.<br/>IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.<br/>Immediately call a poison center or doctor.<br/>Collect spillage.<br/>Store in a well-ventilated place. Keep container tightly closed.<br/>Store locked up.<br/>Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.</p> |
|--------------------------------|--|

### 2.3. Other hazards which do not result in classification

No additional information available

### 2.4. Unknown acute toxicity

Not applicable

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

| Name   | Chemical name / Synonyms                               | Product identifier  | %       |
|--|--|---------------------|---------|
| Diethylenetriamine-bisphenol A-epichlorohydrin polymer | Diethylenetriamine-bisphenol A-epichlorohydrin polymer | CAS-No.: 31326-29-1 | 15 – 40 |

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|                                     |   |                    |           |
|-------------------------------------|---|--------------------|-----------|
|                                     | Phenol, 4,4'-(1-methylethylidene)bis-, polymer with N-(2-aminoethyl)-1,2-ethanediamine and (chloromethyl)oxirane / 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with diethylenetriamine / Phenol, 4,4'-(1-methylethylidene)bis-, polymer with N1-(2-aminoethyl)-1,2-ethanediamine and 2-(chloromethyl)oxirane / Phenol, 4,4'-(1-methylethylidene)bis-, polymer with N-(2-aminoethyl)-1,2-ethanediamine and (chloromethyl)oxirane |                    |           |
| Isophoronediamine                   | 3-(Aminomethyl)-3,5,5-trimethylcyclohexylamine / 3-Aminomethyl-3,5,5-trimethylcyclohexylamine / Isophoronediamine / Cyclohexylamine, 3-aminomethyl-3,5,5-trimethyl-   | CAS-No.: 2855-13-2 | 10 – 30   |
| Cyclohexanamine, 4,4'-methylenebis- | Cyclohexanamine, 4,4'-methylenebis-Bis(cyclohexylamine), 4,4'-methylene- / Cyclohexylamine, 4,4'-methylenebis- / 4,4'-Methylenebis(cyclohexylamine) / Bis(4-aminocyclohexyl)methane / 4,4'-Diaminodicyclohexylmethane / 4,4'-Methylenedi(cyclohexylamine) / 1,4-Bis(aminocyclohexyl)methane / 4,4'-Methylenebis(cyclohexanamine) / 4,4'-Methylenebiscyclohexanamine / 4,4'-Methylenebis(cyclohexan-1-amine)   | CAS-No.: 1761-71-3 | 10 – 30   |
| Diethylenetriamine                  | Diethylenetriamine  | CAS-No.: 111-40-0  | 7 – 13    |
| 1H-Imidazole, 2-ethyl-4-methyl-     | 1H-Imidazole, 2-ethyl-4-methyl-2-Ethyl-4-methylimidazole / Imidazole (1H), 2-ethyl-4-methyl- / 1H-Imidazole, 2-ethyl-5-methyl- / 2-Ethyl-5-methyl-1H-imidazole  | CAS-No.: 931-36-2  | 1 – 5     |
| 4-Methylimidazole                   | 4-Methylimidazole<br>Imidazole (1H), 4-methyl- / Imidazole, 4-methyl- / 1H-Imidazole, 4-methyl- / Methylimidazole, 4- / 1H-Imidazole, 5-methyl- / 4-Methyl-1H-imidazole / 4-methylimidazole   | CAS-No.: 822-36-6  | 0.1 – 0.5 |

Comments : The exact chemical identity and/or exact percentage (concentration) of each ingredient may be held as confidential business information (CBI). Any ingredient not disclosed in this section may have been determined not to be hazardous to health or the environment, or it may be present at a level below its disclosure threshold.

## SECTION 4: First-aid measures

### 4.1. Description of first aid measures

- First-aid measures after inhalation : If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
- First-aid measures after skin contact : If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor.
- First-aid measures after eye contact : 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.
- First-aid measures after ingestion : IF SWALLOWED: rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor. Never give anything by mouth to an unconscious person.

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

|                                     |  |
|-------------------------------------|--|
| Symptoms/effects after inhalation   | : Causes burns to the respiratory system.  |
| Symptoms/effects after skin contact | : Harmful in contact with skin. Causes severe skin burns. Symptoms may include redness, pain, blisters. May cause an allergic skin reaction.                                     |
| Symptoms/effects after eye contact  | : Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. May cause burns. |
| Symptoms/effects after ingestion    | : Harmful if swallowed. May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.   |

### 4.3. Immediate medical attention and special treatment, if necessary

Symptoms may be delayed. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

|                                |   |
|--------------------------------|---|
| Suitable extinguishing media   | : Foam. Carbon dioxide (CO2). Dry chemical. |
| Unsuitable extinguishing media | : Do not use water jet.                     |

### 5.2. Specific hazards arising from the chemical

|                  |   |
|------------------|---|
| Fire hazard      | : Products of combustion may include, and are not limited to: oxides of carbon. Oxides of nitrogen. Amines. Ammonia. Nitric acid. Nitrosamines. Corrosive vapours.  |
| Explosion hazard | : When mixed with sawdust, wood chips, or other cellulosic material, spontaneous combustion can occur under certain conditions. Heat is generated as the air oxidizes the amine. If the heat is not dissipated quickly enough, it can ignite the sawdust. |

### 5.3. Special protective equipment and precautions for fire-fighters

|                                |  |
|--------------------------------|--|
| Firefighting instructions      | : Use of water may generate toxic aqueous solutions.   |
| Protection during firefighting | : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA). |

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

|                  |  |
|------------------|--|
| General measures | : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. |
|------------------|--|

#### 6.1.1. For non-emergency personnel

No additional information available

#### 6.1.2. For emergency responders

No additional information available

### 6.2. Environmental precautions

Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. . Notify authorities if product enters sewers or public waters.

### 6.3. Methods and material for containment and cleaning up

|                 |   |
|-----------------|---|
| For containment | : Collect spillage. Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE). Do not use sawdust, wood chips or other cellulosic materials to absorb the spill, as the possibility for spontaneous combustion exists. |
|-----------------|---|

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Methods for cleaning up : Sweep or shovel spills into appropriate container for disposal. Flush off any remaining material with soapy water. Provide ventilation.

### 6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection".

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid contact with skin, eyes and clothing. Do not breathe dust/fume/gas/mist/vapours/spray. Do not swallow. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear personal protective equipment. When mixed with epoxy curing agents this product causes an exothermic reaction, which in large masses, can produce enough heat to damage or ignite surrounding materials and emit fumes and vapors that vary widely in composition and toxicity. DO NOT spray apply or heat this product.

Hygiene measures : Take off immediately all contaminated clothing and wash it before reuse. Wash hands, forearms and face thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep out of the reach of children. Store tightly closed in a dry, cool and well-ventilated place. Store in a secure location. Store locked up.

Storage temperature : 40 – 90 °F / 4 - 32 °C

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

|  |  |
|--|--|
| <b>PRO-SET® HTP-285 Hardener</b>   |  |
| No additional information available  |  |
| <b>Diethylenetriamine-bisphenol A-epichlorohydrin polymer (31326-29-1)</b> |  |
| No additional information available  |  |
| <b>Isophoronediamine (2855-13-2)</b>                                       |  |
| No additional information available  |  |
| <b>Cyclohexanamine, 4,4'-methylenebis- (1761-71-3)</b>                     |  |
| No additional information available  |  |
| <b>Diethylenetriamine (111-40-0)</b>                                       |  |
| <b>USA - ACGIH - Occupational Exposure Limits</b>                          |  |
| ACGIH OEL TWA [ppm]  | 1 ppm  |
| ACGIH chemical category  | Skin - potential significant contribution to overall exposure by the cutaneous route |
| <b>1H-Imidazole, 2-ethyl-4-methyl- (931-36-2)</b>                          |  |
| No additional information available  |  |
| <b>4-Methylimidazole (822-36-6)</b>  |  |
| No additional information available  |  |

### 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station. Provide readily accessible eye wash stations and safety showers.

Environmental exposure controls : Avoid release to the environment.

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### 8.3. Individual protection measures/Personal protective equipment

#### Hand protection:

Wear suitable gloves resistant to chemical penetration. Polyvinyl alcohol or nitrile-butyl rubber gloves. Neoprene. Butyl rubber gloves. natural rubber gloves

#### Eye protection:

Wear eye/face protection

#### Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Approved organic vapour respirator.

#### Other information:

Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

|  |  |
|--|--|
| Physical state                             | : Liquid   |
| Appearance                                 | : Amber.Liquid.  |
| Colour                                     | : Slightly Amber   |
| Odour                                      | : Ammonia-like   |
| Odour threshold                            | : No data available  |
| pH   | : No data available  |
| Melting point                              | : No data available  |
| Freezing point                             | : No data available  |
| Boiling point                              | : > 400 °F / 204 °C (Estimated based on similar product)         |
| Flash point                                | : > 200 °F / 93 °C (Estimated based on similar product)          |
| Relative evaporation rate (butylacetate=1) | : No data available  |
| Flammability (solid, gas)                  | : No data available  |
| Vapour pressure                            | : < 1 mm Hg (68 °F / 20 °C) [estimated based on ingredient data] |
| Relative vapour density at 20 °C           | : No data available  |
| Relative density                           | : 0.99 (H <sub>2</sub> O = 1)                                    |
| Solubility                                 | : No data available  |
| Partition coefficient n-octanol/water      | : No data available  |
| Auto-ignition temperature                  | : No data available  |
| Decomposition temperature                  | : No data available  |
| Viscosity, kinematic                       | : 429.3 mm <sup>2</sup> /s (68 °F / 20 °C)                       |
| Viscosity, dynamic                         | : No data available  |
| Explosive limits                           | : No data available  |
| Explosive properties                       | : No data available  |
| Oxidising properties                       | : No data available  |

### 9.2. Other information

|              |                           |
|--------------|---------------------------|
| VOC content  | : No data (ASTM 2369-07)  |
| Bulk density | : 8.25 lb/gal (0.99 kg/L) |

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### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

No dangerous reactions known under normal conditions of use. A mass of more than one pound of product plus an epoxy resin will cause irreversible polymerization with significant heat buildup and pressure.

#### 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

Heat. Incompatible materials.

#### 10.5. Incompatible materials

Organic acids. Mineral acids. Oxidizing materials. Halogenated compounds. Nitrosating agents. Sodium hypochlorite. External heating or self-heating could result in rapid temperature increase and pressure build up. If such a condition were to occur in a drum, the drum could expand and rupture violently.

#### 10.6. Hazardous decomposition products

Products of combustion may include, and are not limited to: oxides of carbon. Oxides of nitrogen. Amines. Ammonia. Nitric acid. Nitrosamines. Corrosive vapours.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity (oral) : Harmful if swallowed.  
Acute toxicity (dermal) : Harmful in contact with skin.  
Acute toxicity (inhalation) : Not classified.

| PRO-SET® HTP-285 Hardener   |  |
|---|--|
| ATE CA (oral)   | 492.761 mg/kg bodyweight                             |
| ATE CA (Dermal)   | 1065.005 mg/kg bodyweight                            |
| Diethylenetriamine-bisphenol A-epichlorohydrin polymer (31326-29-1) |  |
| LD50 oral rat   | Refer to Diethylenetriamine data; ATPE (500 mg/kg)   |
| LD50 dermal rabbit  | Refer to Diethylenetriamine data; ATPE (1100 mg/kg)  |
| LC50 inhalation rat   | No data available. Refer to Diethylenetriamine data. |
| Isophoronediamine (2855-13-2)                                       |  |
| LD50 oral rat   | 1030 mg/kg   |
| LD50 dermal rabbit  | > 2000 mg/kg   |
| LC50 inhalation rat   | > 5.01 mg/l/4h mist                                  |
| ATE CA (oral)   | 1030 mg/kg bodyweight                                |
| Cyclohexanamine, 4,4'-methylenebis- (1761-71-3)                     |  |
| LD50 oral rat   | 380 mg/kg  |
| LD50 dermal rabbit  | > 1000 mg/kg   |
| Diethylenetriamine (111-40-0)                                       |  |
| LD50 oral rat   | 1620 mg/kg   |
| LD50 dermal rabbit  | 1090 mg/kg   |
| LC50 Inhalation - Rat (Dust/Mist)                                   | 0.07 – 0.3 mg/l/4h aerosol/mist                      |
| 1H-Imidazole, 2-ethyl-4-methyl- (931-36-2)                          |  |
| LD50 oral rat   | 731 – 1000 mg/kg                                     |

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|  |  |
|--|--|
| LD50 dermal rabbit   | > 400 mg/kg  |
| <b>4-Methylimidazole (822-36-6)</b>  |  |
| LD50 oral rat  | 350 – 751 mg/kg  |
| LD50 dermal rabbit   | > 440 mg/kg  |
| Skin corrosion/irritation  | : Causes severe skin burns.  |
| Serious eye damage/irritation  | : Causes serious eye damage.   |
| Respiratory or skin sensitisation  | : May cause an allergic skin reaction.   |
| Germ cell mutagenicity   | : Not classified.  |
| Carcinogenicity  | : Suspected of causing cancer.   |
| <b>4-Methylimidazole (822-36-6)</b>  |  |
| IARC group   | 2B - Possibly carcinogenic to humans   |
| In OSHA Hazard Communication Carcinogen list                               | Yes  |
| Reproductive toxicity  | : Not classified.  |
| STOT-single exposure   | : May cause respiratory irritation.  |
| <b>Diethylenetriamine-bisphenol A-epichlorohydrin polymer (31326-29-1)</b> |  |
| STOT-single exposure   | May cause respiratory irritation.  |
| <b>4-Methylimidazole (822-36-6)</b>  |  |
| STOT-single exposure   | May cause respiratory irritation.  |
| STOT-repeated exposure   | : May cause damage to organs through prolonged or repeated exposure.   |
| <b>Diethylenetriamine-bisphenol A-epichlorohydrin polymer (31326-29-1)</b> |  |
| NOAEL (oral, rat, 90 days)   | 60 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)             |
| <b>Isophoronediamine (2855-13-2)</b>                                       |  |
| LOAEL (oral, rat, 90 days)   | 160 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)  |
| <b>Cyclohexanamine, 4,4'-methylenebis- (1761-71-3)</b>                     |  |
| STOT-repeated exposure   | May cause damage to organs through prolonged or repeated exposure.   |
| <b>Diethylenetriamine (111-40-0)</b>                                       |  |
| LOAEL (oral, rat, 90 days)   | 530 – 620 mg/kg bodyweight Animal: rat, Guideline: other:  |
| NOAEL (oral, rat, 90 days)   | 70 – 80 mg/kg bodyweight Animal: rat, Guideline: other:  |
| Aspiration hazard  | : Not classified.  |
| <b>PRO-SET® HTP-285 Hardener</b>   |  |
| Viscosity, kinematic   | 429.3 mm <sup>2</sup> /s (68 °F / 20 °C)   |
| Symptoms/effects after inhalation  | : Causes burns to the respiratory system.  |
| Symptoms/effects after skin contact  | : Harmful in contact with skin. Causes severe skin burns. Symptoms may include redness, pain, blisters. May cause an allergic skin reaction.                                     |
| Symptoms/effects after eye contact   | : Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. May cause burns. |
| Symptoms/effects after ingestion   | : Harmful if swallowed. May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.   |
| Other information  | : Likely routes of exposure: ingestion, inhalation, skin and eye.  |

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : Toxic to aquatic life with long lasting effects.

|  |  |
|--|--|
| <b>Diethylenetriamine-bisphenol A-epichlorohydrin polymer (31326-29-1)</b> |  |
| LC50 - Fish [1]  | > 47 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri) |
| <b>Isophoronediamine (2855-13-2)</b>                                       |  |
| LC50 - Fish [1]  | 110 mg/l Test organisms (species): Leuciscus idus  |
| EC50 - Crustacea [1]   | 14.6 – 21.5 mg/l (Exposure time: 48 h - Species: Daphnia magna [semi-static])            |
| LOEC (chronic)   | 10 mg/l Test organisms (species): Daphnia magna Duration: '21 d'                         |
| NOEC (chronic)   | 3 mg/l Test organisms (species): Daphnia magna Duration: '21 d'                          |



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| <b>Cyclohexanamine, 4,4'-methylenebis- (1761-71-3)</b> |  |
|--|--|
| LC50 - Fish [1]  | > 100 mg/l Test organisms (species): Leuciscus idus                          |
| LC50 - Fish [2]  | 68 mg/l Test organisms (species): Leuciscus idus                             |
| LOEC (chronic)   | 7.2 mg/l Test organisms (species): Daphnia magna Duration: '21 d'            |
| NOEC (chronic)   | 4 mg/l Test organisms (species): Daphnia magna Duration: '21 d'              |
| NOEC chronic fish                                      | > 1 mg/l Test organisms (species): other: Duration: '14 d'                   |
| <b>Diethylenetriamine (111-40-0)</b>                   |  |
| LC50 - Fish [1]  | 248 mg/l (Exposure time: 96 h - Species: Poecilia reticulata [static])       |
| EC50 - Crustacea [1]                                   | 16 mg/l (Exposure time: 48 h - Species: Daphnia magna)                       |
| LC50 - Fish [2]  | 1014 mg/l (Exposure time: 96 h - Species: Poecilia reticulata [semi-static]) |
| <b>4-Methylimidazole (822-36-6)</b>                    |  |
| EC50 - Crustacea [1]                                   | 180 mg/l (Exposure time: 48 h - Species: Daphnia magna)                      |

### 12.2. Persistence and degradability

| <b>PRO-SET® HTP-285 Hardener</b> |                  |
|----------------------------------|------------------|
| Persistence and degradability    | Not established. |

### 12.3. Bioaccumulative potential

| <b>PRO-SET® HTP-285 Hardener</b>                       |                  |
|--|------------------|
| Bioaccumulative potential                              | Not established. |
| <b>Isophoronediamine (2855-13-2)</b>                   |                  |
| Partition coefficient n-octanol/water                  | 0.79 (at 23 °C)  |
| <b>Cyclohexanamine, 4,4'-methylenebis- (1761-71-3)</b> |                  |
| Partition coefficient n-octanol/water                  | 2.03             |
| <b>Diethylenetriamine (111-40-0)</b>                   |                  |
| BCF - Fish [1]   | 0.3 – 1.7        |
| Partition coefficient n-octanol/water                  | -1.3             |
| <b>4-Methylimidazole (822-36-6)</b>                    |                  |
| Partition coefficient n-octanol/water                  | 0.35 (at 25 °C)  |

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

Other information : No other effects known.

| Ingredient   | CAS#       | Ecotoxicity Classification Information       |
|--|------------|--|
| Diethylenetriamine-bisphenol A-epichlorohydrin polymer | 31326-29-1 | Not classified                               |
| Isophoronediamine                                      | 2855-13-2  | Acute Aquatic Cat. 3; Chronic Aquatic Cat. 3 |
| Cyclohexanamine, 4,4'-methylenebis-                    | 1761-71-3  | Acute Aquatic Cat. 2; Chronic Aquatic Cat. 2 |
| Diethylenetriamine                                     | 111-40-0   | Not classified                               |
| 1H-Imidazole, 2-ethyl-4-methyl-                        | 931-36-2   | Acute Aquatic Cat. 3; Chronic Aquatic Cat. 3 |
| 4-Methylimidazole                                      | 822-36-6   | Not classified                               |

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Product/Packaging disposal recommendations : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Additional information : Recover and recycle product if possible. If recovery and recycling are not possible incinerate or dispose of in accordance with local regulations.

# PRO-SET® HTP-285 Hardener

## Safety Data Sheet

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015

### SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

#### 14.1. UN number

UN-No.(DOT/TDG) : UN2735  
UN-No. (IMDG) : 2735  
UN-No. (IATA) : 2735

#### 14.2. UN proper shipping name

Proper Shipping Name (DOT/TDG) : Polyamines, liquid, corrosive, n.o.s. (Methylenebiscyclohexanamine, 4,4'-)  
Proper Shipping Name (IMDG) : POLYAMINES, LIQUID, CORROSIVE, N.O.S. (Methylenebiscyclohexanamine, 4,4'-, MARINE POLLUTANT)  
Proper Shipping Name (IATA) : Polyamines, liquid, corrosive, n.o.s. (Methylenebiscyclohexanamine, 4,4'-)

#### 14.3. Transport hazard class(es)

##### Department of Transportation (DOT) and Transportation of Dangerous Goods (TDG)

Class (DOT/TDG) : 8  
Hazard labels (DOT/TDG) : 8



##### IMDG

Transport hazard class(es) (IMDG) : 8  
Danger labels (IMDG) : 8



##### IATA

Transport hazard class(es) (IATA) : 8  
Danger labels (IATA) : 8



#### 14.4. Packing group

Packing group (DOT/TDG) : II  
Packing group (IMDG) : II  
Packing group (IATA) : II

#### 14.5. Environmental hazards

Other information : No supplementary information available.

#### 14.6. Special precautions for user

Special transport precautions : Do not handle until all safety precautions have been read and understood.

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### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

All components of this product are listed, or excluded from listing, on the Canadian NDSL (Non-Domestic Substances List) inventories.


All components of this product are listed, or excluded from listing, on the Canadian DSL (Domestic Substances List) inventories except for:

|  |   |
|--|---|
| <b>4-Methylimidazole (822-36-6)</b>  |   |
| Not listed on the Canadian DSL (Domestic Substances List)                  |   |
| <b>Diethylenetriamine-bisphenol A-epichlorohydrin polymer (31326-29-1)</b> |   |
| EPA TSCA Regulatory Flag   | XU - XU - indicates a substance exempt from reporting under the Chemical Data Reporting Rule, (40 CFR 711). |

### 15.2. International regulations

No additional information available

### 15.3. US State regulations

 **WARNING:** This product can expose you to 4-Methylimidazole, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

|   |   |   |   |                                  |
|---|---|---|---|----------------------------------|
| <b>4-Methylimidazole (822-36-6)</b>                   |   |   |   |                                  |
| U.S. - California - Proposition 65 - Carcinogens List | U.S. - California - Proposition 65 - Developmental Toxicity | U.S. - California - Proposition 65 - Reproductive Toxicity - Female | U.S. - California - Proposition 65 - Reproductive Toxicity - Male | No significant risk level (NSRL) |
| Yes   | No  | No  | No  | 29 µg/day                        |

|  |  |
|--|--|
| <b>Isophoronediamine (2855-13-2)</b>                       |  |
| U.S. - New Jersey - Right to Know Hazardous Substance List |  |

|  |  |
|--|--|
| <b>Diethylenetriamine (111-40-0)</b>                       |  |
| U.S. - New Jersey - Right to Know Hazardous Substance List |  |
| U.S. - Pennsylvania - RTK (Right to Know) List             |  |
| U.S. - Massachusetts - Right To Know List                  |  |

## SECTION 16: Other information

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015

Revision date : 01/03/2022

Other information : None.

NFPA health hazard : 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

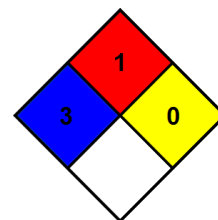
NFPA fire hazard : 1 - Materials that must be preheated before ignition can occur.

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



Hazard Rating  
Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

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.

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