

# 1: Identification

Product identifier Mixture identification: Trade name: EPOJET / B Trade code: 9015612 Recommended use and restrictions on use Recommended use: Hardener for epoxy products Restrictions on use: Not available Supplier's details Company: MAPEI INC. (Canada) 2900 Francis-Hughes Avenue

H7L 3J5 - Laval - QC - CAN

Phone: 1-450-662-1212

Responsible: RDProductSafety@mapei.com

#### **Emergency phone number**

Emergency Number (USA/Canada) CHEMTREC 1(800) 424-9300 / 1(703) 527-3887 Emergency Transport CANUTEC (Canada) 1-613-996-6666

# 2. Hazard identification



#### **Classification of the product**

| Acute toxicity (oral), Category 4  | Harmful if swallowed.   |
|--|---|
| Serious eye damage, Category 1   | Causes serious eye damage.  |
| Skin Sensitization, Category 1   | May cause an allergic skin reaction.  |
| Reproductive toxicity, Category 2  | Suspected of damaging fertility. Suspected of damaging the unborn child.  |
| Specific target organ toxicity following repeated exposure, Category $1$ | Causes damage to organs through prolonged or repeated exposure if inhaled, in contact with skin and if swallowed. |
| Chronic (long-term) aquatic hazard - Category 3                          | Harmful to aquatic life with long lasting effects.  |
| Skin corrosion, Category 1C  | Causes severe skin burns and eye damage.  |
| Label elements   |   |

#### Hazard pictograms and Signal Word



#### Hazard statements

| Hazard stateme           | ents  |  |
|--------------------------|---|--|
| H302                     | Harmful if swallowed.   |  |
| H314                     | Causes severe skin burns and eye damage.  |  |
| H317                     | May cause an allergic skin reaction.  |  |
| H361fd                   | Suspected of damaging fertility. Suspected of damaging the unborn child.  |  |
| H372                     | Causes damage to organs through prolonged or repeated exposure if inhaled, in contact with skin and if swallowed. |  |
| H412                     | Harmful to aquatic life with long lasting effects.  |  |
| Precautionary statements |   |  |
| P201                     | Obtain special instructions before use.   |  |
| P202                     | Do not handle until all safety precautions have been read and understood.   |  |

- P260 Do not breathe mist/vapours/spray.
- P264 Wash skin thoroughly after handling.

| P270               | Do not eat, drink or smoke when using this product.  |
|--------------------|--|
| P273               | Avoid release to the environment.  |
| P280               | Wear protective gloves/clothing and eye/face protection.   |
| P301+P312          | IF SWALLOWED: Call a doctor if you feel unwell.  |
| P301+P330+P33<br>1 | 3 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.   |
| P302+P352          | IF ON SKIN: Wash with plenty of water.   |
| P303+P361+P35<br>3 | F 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+P33<br>8 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P308+P313          | IF exposed or concerned: Get medical advice/attention.   |
| P310               | Immediately call a doctor.   |
| P333+P313          | If skin irritation or rash occurs: Get medical advice/attention.   |
| P362+P364          | Take off contaminated clothing and wash it before reuse.   |
| P501               | Dispose of contents/container in accordance with applicable regulations.   |
| Other hazards      |  |
| None               |  |

#### Ingredient(s) with unknown acute toxicity

None

# 3. Composition/information on ingredients Substances

# Not Relevant

### Mixtures

Hazardous components within the meaning of WHMIS 2015 and related classification:

#### List of components

| Qty        | Name  | Ident. Numb.                                       | Classification  |
|------------|---|--|---|
| 50-75 %    | polyamido amine; Fatty acids, tall-oil,<br>reaction products with<br>tetraethylenepentamine     | CAS:68953-36-6<br>EC:273-201-6                     | Skin Corr. 1C, H314; Eye Dam. 1, H318;<br>Skin Sens. 1, H317  |
| 10-20 %    | triethylenetetramine  | CAS:112-24-3<br>EC:203-950-6<br>Index:612-059-00-5 | Skin Corr. 1B, H314; Skin Sens. 1, H317;<br>Aquatic Chronic 3, H412; Acute Tox. 4,<br>H312  |
| 10-20 %    | benzyl alcohol; benzenemethanol   | CAS:100-51-6<br>EC:202-859-9<br>Index:603-057-00-5 | Acute Tox. 4, H302; Eye Irrit. 2A, H319   |
| 10-20 %    | aminoethylpiperazine; 2-piperazin-1-<br>ylethylamine  | CAS:140-31-8<br>EC:205-411-0<br>Index:612-105-00-4 | Acute Tox. 3, H311; Repr. 2, H361; STOT<br>RE 1, H372; Acute Tox. 4, H302; Skin Corr.<br>1B, H314; Skin Sens. 1, H317; Aquatic<br>Chronic 3, H412 |
| 5-10 %     | 2,4,6-tri(dimethylaminomethyl)phenol;<br>Mesitol, alpha2,alpha4,alpha6-<br>tris(dimethylamino)- | CAS:90-72-2<br>EC:202-013-9<br>Index:603-069-00-0  | Skin Corr. 1C, H314; Eye Dam. 1, H318;<br>Acute Tox. 4, H302  |
| 2.5-5 %    | tetraethylenepentamine; 3,6,9-<br>triazaundecamethylenediamine                                  | CAS:112-57-2<br>EC:203-986-2<br>Index:612-060-00-0 | Skin Corr. 1B, H314; Skin Sens. 1, H317;<br>Aquatic Chronic 2, H411; Acute Tox. 4,<br>H302; Acute Tox. 4, H312                                    |
| 1-2.5 %    | bis[(dimethylamino)methyl]phenol;   | CAS:71074-89-0<br>EC:275-162-0                     | Skin Corr. 1C, H314   |
| 0.1-0.25 % | diethylene triamine; 2,2'-<br>iminodi(ethylamine)   | CAS:111-40-0<br>EC:203-865-4<br>Index:612-058-00-X | Acute Tox. 2, H330; Acute Tox. 4, H302;<br>Acute Tox. 4, H312; Skin Corr. 1B, H314;<br>STOT SE 3, H335; Skin Sens. 1, H317                        |

The actual concentration of the components listed above is withheld as a trade secret.

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#### 4. First-aid measures

#### Description of necessary first-aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

OBTAIN IMMEDIATE MEDICAL ATTENTION.

Remove contaminated clothing immediately and dispose of safely.

After contact with skin, wash immediately with soap and plenty of water.

If skin irritation or rash occurs: Get medical advice/attention.

#### In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an opthalmologist immediately.

Protect uninjured eye.

Remove contact lenses, if present and easy to do. Continue rinsing.

In case of Ingestion:

Give nothing to eat or drink.

IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

#### In case of Inhalation:

If breathing is irregular or stopped, administer artificial respiration.

In case of inhalation, consult a doctor immediately and show him packing or label.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

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

Eye irritation

Eye damages

Skin Irritation

Erythema

#### Indication of immediate medical attention and special treatment needed, if necessary

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Treatment:

(see paragraph 4.1)

#### 5. Fire-fighting measures

#### Suitable and unsuitable extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO2).

Unsuitable extinguishing media:

None in particular.

#### Specific hazards arising from the hazardous product

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

Hazardous combustion products: Not available

Explosive properties: Not available

Oxidizing properties: Not available

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

Use suitable breathing apparatus.

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

# 6. Accidental release measures

# Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Provide adequate ventilation.

Use appropriate respiratory protection.

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Limit leakages with earth or sand.

# Methods and material for containment and cleaning up

Suitable material for taking up: absorbing material, organic, sand Retain contaminated washing water and dispose it.

# 7. Handling and storage

#### Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists. Exercise the greatest care when handling or opening the container. Use localized ventilation system. Don't use empty container before they have been cleaned. Before making transfer operations, assure that there aren't any incompatible material residuals in the containers. Contaminated clothing should be changed before entering eating areas. Do not eat or drink while working. Wash skin thoroughly after handling. See also section 8 for recommended protective equipment. **Conditions for safe storage, including any incompatibilities** Keep away from food, drink and feed. Incompatible materials: None in particular. Instructions as regards storage premises: Adequately ventilated premises.

Storage temperature: Not available

# 8. Exposure controls/personal protection Control parameters

# **Community Occupational Exposure Limits (OEL)**

|   | OEL<br>Type | Country         | Occupational Exposure Limit  |
|---|-------------|-----------------|--|
| benzyl alcohol;<br>benzenemethanol<br>CAS: 100-51-6                   | MAK         | GERMANY         | Long Term: 22 mg/m3 - 5 ppm  |
|   | MAK         | SWITZERLAN<br>D | Long Term: 22 mg/m3 - 5 ppm  |
| diethylene triamine; 2,2'-<br>iminodi(ethylamine)<br>CAS: 111-40-0    | ACGIH       |                 | Long Term: 1 ppm<br>Skin - URT and eye irr   |
|   | ACGIH       |                 | Long Term: 1 ppm<br>Skin - potential significant contribution to overall exposure by the cutaneous route;eye<br>and upper respiratory tract irritation |
|   | MAK         | AUSTRIA         | Long Term: 4 mg/m3 - 1 ppm   |
|   | MAK         | SWITZERLAN<br>D | Long Term: 4 mg/m3 - 1 ppm   |
| Predicted No Effect Con   | centration  | (PNEC) value    | 25   |
| aminoethylpiperazine; 2-<br>piperazin-1-ylethylamine<br>CAS: 140-31-8 | Exposure R  | oute: Fresh Wa  | ater; PNEC Limit: 0.058 mg/l   |
|   | Exposure R  | oute: Marine w  | vater; PNEC Limit: 0.0058 mg/l   |
|   | Exposure R  | oute: Intermit  | tent release; PNEC Limit: 0.58 mg/l  |
|   | Exposure R  | oute: Freshwa   | ter sediments; PNEC Limit: 215 mg/kg   |
|   | Exposure R  | oute: Marine w  | vater sediments; PNEC Limit: 21.5 mg/kg  |
|   | Exposure R  | oute: Soil; PNE | EC Limit: 42.9 mg/kg   |
|   | Exposure R  | oute: Microorg  | anisms in sewage treatments; PNEC Limit: 250 mg/l  |
| tetraethylenepentamine;   | Exposure R  | oute: Fresh Wa  | ater; PNEC Limit: 0.00068 mg/l   |
| 3,6,9-<br>triazaundecamethylenedia<br>mine<br>CAS: 112-57-2           | I           |                 |  |
|   | Exposure R  | oute: Marine w  | vater; PNEC Limit: 0.00068 mg/l  |
|   | Exposure R  | oute: Freshwa   | ter sediments; PNEC Limit: 3.34 mg/kg  |
|   | Exposure R  | oute: Marine w  | vater sediments; PNEC Limit: 0.343 mg/kg   |
|   | Exposure R  | oute: Soil; PNE | EC Limit: 0.683 mg/kg  |
| diethylene triamine; 2,2'-<br>iminodi(ethylamine)<br>CAS: 111-40-0    | Exposure R  | oute: Fresh Wa  | ater; PNEC Limit: 0.56 mg/l  |
|   |             |                 |  |

|   | Exposure Route: Marine water; PNEC Limit: 0.056 mg/l  |
|---|---|
|   | Exposure Route: Freshwater sediments; PNEC Limit: 1072 mg/kg  |
|   | Exposure Route: Marine water sediments; PNEC Limit: 107.2 mg/kg   |
|   | Exposure Route: Intermittent release; PNEC Limit: 0.32 mg/l   |
|   | Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 6 mg/l   |
|   | Exposure Route: Soil; PNEC Limit: 214 mg/kg   |
| Derived No Effect Level   | (DNEL) values   |
| triethylenetetramine<br>CAS: 112-24-3   | Exposure Route: Human Inhalation; Exposure Frequency: Short Term, systemic effects<br>Worker Industry: 5380 mg/m3; Consumer: 1600 mg/m3 |
|   | Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects<br>Worker Industry: 0.57 mg/kg                            |
|   | Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects Worker Industry: 1 mg/m3; Consumer: 0.29 mg/m3        |
|   | Exposure Route: Human Dermal; Exposure Frequency: Long Term, local effects<br>Worker Industry: 0.028 mg/m3; Consumer: 0.43 mg/cm2       |
|   | Exposure Route: Human Dermal; Exposure Frequency: Short Term, systemic effects<br>Consumer: 8 mg/kg                                     |
|   | Exposure Route: Human Oral; Exposure Frequency: Short Term, systemic effects<br>Consumer: 20 mg/kg                                      |
|   | Exposure Route: Human Dermal; Exposure Frequency: Short Term, local effects<br>Consumer: 1 mg/cm2                                       |
|   | Exposure Route: Human Oral; Exposure Frequency: Long Term, local effects<br>Consumer: 0.43 mg/cm2                                       |
|   | Exposure Route: Human Dermal; Exposure Frequency: Short Term, systemic effects Worker Industry: 20 mg/kg; Consumer: 10 mg/kg            |
|   | Exposure Route: Human Dermal; Exposure Frequency: Short Term, local effects Worker Industry: 0.04 mg/cm2; Consumer: 0.02 mg/cm2         |
|   | Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects<br>Worker Industry: 3.3 mg/kg; Consumer: 1.7 mg/kg        |
|   | Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects<br>Worker Industry: 3.6 mg/m3; Consumer: 0.9 mg/m3    |
|   | Exposure Route: Human Dermal; Exposure Frequency: Long Term, local effects<br>Worker Industry: 0.006 mg/cm2; Consumer: 0.003 mg/cm2     |
|   | Exposure Route: Human Inhalation; Exposure Frequency: Short Term, systemic effects Worker Industry: 21.4 mg/m3; Consumer: 5.3 mg/m3     |
|   | Exposure Route: Human Oral; Exposure Frequency: Short Term, systemic effects Consumer: 1.5 mg/kg  |
|   | Exposure Route: Human Oral; Exposure Frequency: Long Term, systemic effects Consumer: 0.3 mg/kg   |
| 2,4,6-<br>tri(dimethylaminomethyl)<br>phenol; Mesitol,<br>alpha2,alpha4,alpha6-<br>tris(dimethylamino)-<br>CAS: 90-72-2 | Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects Worker Industry: 0.31 mg/m3                           |
| tetraethylenepentamine;<br>3,6,9-<br>triazaundecamethylenedia<br>mine<br>CAS: 112-57-2                                  | Consumer: 10 mg/kg  |
|   | Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects<br>Worker Professional: 0.74 mg/kg                        |
|   | Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects Consumer: 0.32 mg/kg                                      |
|   | Exposure Route: Human Oral; Exposure Frequency: Long Term, systemic effects   |

Consumer: 0.53 mg/kg

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects Worker Professional: 0.00129 mg/l

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects Consumer: 0.00038 mg/l

diethylene triamine; 2,2'- Exposure Route: Human Oral; Exposure Frequency: Short Term, local effects iminodi(ethylamine) Consumer: 4.88 mg/kg CAS: 111-40-0

> Exposure Route: Human Inhalation; Exposure Frequency: Short Term, systemic effects Worker Industry: 92.1 mg/m3; Consumer: 27.5 mg/m3

> Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects Worker Industry: 15.4 mg/m3; Consumer: 4.6 mg/m3

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, local effects Worker Industry: 2.6 mg/m3

Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects Worker Industry: 11.4 mg/kg; Consumer: 4.88 mg/kg

# Appropriate engineering controls

Not available

# Individual protection measures, such as personal protective equipment (PPE)

Eve protection:

Use close fitting safety goggles, don't use eye lens.

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

Protection for hands:

Suitable materials for safety gloves; 29 CFR 1910.138 - ANSI/ISEA 105:

Polychloroprene - CR: thickness >=0,5mm; breakthrough time >=480min.

Nitrile rubber - NBR: thickness >=0,35mm; breakthrough time >=480min.

Butyl rubber - IIR: thickness >=0,5mm; breakthrough time >=480min.

Fluorinated rubber - FKM: thickness >=0,4mm; breakthrough time >=480min.

Use impervious gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber.

Respiratory protection:

Respiratory protection must be used where exposure levels exceed workplace exposure limits. Refer to 29 CFR 1910.134 - CSA Z94.4 for information on selection and use of appropriate respiratory protection equipment. Use adequate protective respiratory equipment.

# 9. Physical and chemical properties

Dhusiaal states liquid

# Information on basic physical and chemical properties

| Physical state: Liquid  |
|---|
| Appearance and colour: viscous liquid amber                     |
| Odour: No data available  |
| Odour threshold: No data available                              |
| pH: No data available   |
| Melting point / freezing point: No data available               |
| Initial boiling point and boiling range: 200 °C (392 °F)        |
| Flash point: 100 °C (212 °F)                                    |
| Evaporation rate: No data available                             |
| Upper/lower flammability or explosive limits: No data available |
| Vapour density: No data available                               |
| Vapour pressure: No data available                              |
| Relative density: 0.99 g/cm3                                    |
| Solubility in water: No data available                          |
| Solubility in oil: No data available                            |
| Partition coefficient (n-octanol/water): No data available      |
| Auto-ignition temperature: No data available                    |
| Decomposition temperature: No data available                    |
| Viscosity: No data available                                    |
| Explosive properties: No data available                         |
| Oxidizing properties: No data available                         |
| Solid/gas flammability: No data available                       |

#### Other information

Substance Groups relevant properties No data available Miscibility: No data available Fat Solubility: No data available Conductivity: No data available

#### 10. Stability and reactivity

#### Reactivity

Stable under normal conditions

Chemical stability

# Data not available.

Possibility of hazardous reactions

None.

#### **Conditions to avoid**

Stable under normal conditions.

# Incompatible materials

None in particular.

#### Hazardous decomposition products

None.

#### **11.** Toxicological information

#### Information on toxicological effects

Likely routes of exposure:

Skin contact, skin absorption, eye contact, inhalation and ingestion.

#### Toxicological Information of the Preparation

| a) acute toxicity                      | The product is classified: Acute toxicity (oral), Category 4(H302)                                      |
|--|---|
|  | ATEmix - Oral: 1966.1 mg/kg bw  |
| b) skin corrosion/irritation           | The product is classified: Skin corrosion, Category 1C(H314)  |
| c) serious eye damage/irritation       | The product is classified: Serious eye damage, Category 1(H318)   |
| d) respiratory or skin sensitisation   | The product is classified: Skin Sensitization, Category 1(H317)   |
| e) germ cell mutagenicity              | Not classified  |
|  | Based on available data, the classification criteria are not met  |
| f) carcinogenicity                     | Not classified  |
|  | Based on available data, the classification criteria are not met  |
| g) reproductive toxicity               | The product is classified: Reproductive toxicity, Category 2(H361)                                      |
| h) STOT-single exposure                | Not classified  |
|  | Based on available data, the classification criteria are not met  |
| i) STOT-repeated exposure              | The product is classified: Specific target organ toxicity following repeated exposure, Category 1(H372) |
| j) aspiration hazard                   | Not classified  |
|  | Based on available data, the classification criteria are not met  |
| Toxicological information on main com  | ponents of the mixture:   |
| triethylenetetramine a) acute toxicity | LD50 Skin Rabbit 1465 mg/kg   |

| triethylenetetramine | <ul> <li>acute toxicity</li> </ul> | LD50 Skin Rabbit 1465 mg/kg |
|----------------------|------------------------------------|-----------------------------|
|                      |                                    | LD50 Oral Rat = 2500 mg/kg  |

| benzyl alcohol;<br>benzenemethanol                   | a) acute toxicity         | LD50 Oral Rat = 1620 mg/kg    |
|--|---------------------------|-------------------------------|
| aminoethylpiperazine; 2-<br>piperazin-1-ylethylamine | a) acute toxicity         | LD50 Skin Rabbit = 866 mg/kg  |
|  |                           | LD50 Oral Rabbit > 2097 mg/kg |
|  |                           | LD50 Skin Rabbit = 880 µL/kg  |
|  |                           | LD50 Oral Rat = 2140 µL/kg    |
|  | e) germ cell mutagenicity | NOAEL Rat > 899 mg/kg         |

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| 2,4,6-<br>tri(dimethylaminomethyl)<br>phenol; Mesitol,<br>alpha2,alpha4,alpha6-<br>tris(dimethylamino)- | a) acute toxicity    | LD50 Oral Rat = 2169 mg/kg     |
|---|----------------------|--------------------------------|
|   |                      | LD50 Skin Rat > 1 ml/kg        |
| diethylene triamine; 2,2'-<br>iminodi(ethylamine)   | a) acute toxicity    | LD50 Skin Rabbit = 1045 mg/kg  |
|   |                      | LD50 Oral Rat = 1553 mg/kg     |
|   |                      | LC50 Inhalation Mist 0.07 mg/l |
|   |                      |                                |
| Substance(s) listed on  | the IARC Monographs: |                                |

None

#### Substance(s) listed as OSHA Carcinogen(s):

None

#### Substance(s) listed as NIOSH Carcinogen(s):

None

#### Substance(s) listed on the NTP report on Carcinogens:

None

# **12. Ecological information**

# Ecotoxicity

Adopt good working practices, so that the product is not released into the environment.

#### List of Eco-Toxicological properties of the product

The product is classified: Chronic (long-term) aquatic hazard - Category 3(H412)

#### List of Eco-Toxicological properties of the components

| Component   | Ident. Numb.  | Ecotox Data  |
|---|---|--|
| triethylenetetramine                                | CAS: 112-24-3 -<br>EINECS: 203-<br>950-6 - INDEX:<br>612-059-00-5   | a) Aquatic acute toxicity : LC50 Fish Poecilia reticulata = 570 mg/L 96h<br>IUCLID             |
|   |   | a) Aquatic acute toxicity : LC50 Fish Pimephales promelas = 495 mg/L 96h IUCLID                |
|   |   | a) Aquatic acute toxicity: EC50 Daphnia Daphnia magna = 31.1 mg/L 48h<br>IUCLID                |
|   |   | a) Aquatic acute toxicity : EC50 Algae Desmodesmus subspicatus = $2.5 \text{ mg/L}$ 72h IUCLID |
|   |   | a) Aquatic acute toxicity : EC50 Algae Pseudokirchneriella subcapitata = 20 mg/L 72h IUCLID    |
|   |   | a) Aquatic acute toxicity : EC50 Algae Pseudokirchneriella subcapitata = $3.7$ mg/L 96h EPA    |
| benzyl alcohol; benzenemethanol                     | CAS: 100-51-6 -<br>EINECS: 202-<br>859-9 - INDEX:<br>603-057-00-5   | a) Aquatic acute toxicity : LC50 Fish Pimephales promelas = 460 mg/L 96h<br>EPA                |
| aminoethylpiperazine; 2-piperazin<br>1-ylethylamine | - CAS: 140-31-8 -<br>EINECS: 205-<br>411-0 - INDEX:<br>612-105-00-4 | a) Aquatic acute toxicity : LC50 Fish = 2190 mg/L 96   |
|   |   | a) Aquatic acute toxicity : EC50 Daphnia = 58 mg/L 48  |
|   |   | a) Aquatic acute toxicity : EC50 Algae > 1000 mg/L 72  |
|   |   | a) Aquatic acute toxicity: LC50 Fish Pimephales promelas 1950 mg/L 96h EPA                     |
|   |   | a) Aquatic acute toxicity: LC50 Fish Poecilia reticulata > 1000 mg/L 96h<br>IUCLID             |
|   |   |  |

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|   |  | a) Aquatic acute toxicity : LC50 Fish Oncorhynchus mykiss >= 100 mg/L 96h IUCLID                        |
|---|--|---|
|   |  | a) Aquatic acute toxicity: EC50 Daphnia Daphnia magna = 32 mg/L 48h<br>IUCLID                           |
|   |  | a) Aquatic acute toxicity : EC50 Algae Pseudokirchneriella subcapitata = 495 mg/L 72h IUCLID            |
| 2,4,6-<br>tri(dimethylaminomethyl)phenol;<br>Mesitol, alpha2,alpha4,alpha6-<br>tris(dimethylamino)- | CAS: 90-72-2 -<br>EINECS: 202-<br>013-9 - INDEX:<br>603-069-00-0 | a) Aquatic acute toxicity : LC50 Fish = 175 mg/L 96h  |
|   |  | a) Aquatic acute toxicity: EC50 Algae = 46.7 mg/L 72h   |
|   |  | a) Aquatic acute toxicity : NOEC Algae = 25.1 mg/L 72h  |
| tetraethylenepentamine; 3,6,9-<br>triazaundecamethylenediamine                                      | CAS: 112-57-2<br>EINECS: 203-<br>986-2 - INDEX:<br>612-060-00-0  | <ul> <li>a) Aquatic acute toxicity : LC50 Fish Poecilia reticulata = 420 mg/L 96h<br/>IUCLID</li> </ul> |
|   |  | a) Aquatic acute toxicity: EC50 Daphnia Daphnia magna = 24.1 mg/L 48h IUCLID                            |
|   |  | a) Aquatic acute toxicity : EC50 Algae Pseudokirchneriella subcapitata = $2.1$ mg/L 72h IUCLID          |
| diethylene triamine; 2,2'-<br>iminodi(ethylamine)   | CAS: 111-40-0<br>EINECS: 203-<br>865-4 - INDEX:<br>612-058-00-X  | - a) Aquatic acute toxicity : LC50 Fish = 430 mg/L 96   |
|   |  | a) Aquatic acute toxicity : EC50 Daphnia = 32 mg/L 48   |

#### Persistence and degradability

N.A.

#### **Bioaccumulative potential**

N.A.

#### Mobility in soil

N.A.

#### Other adverse effects

N.A.

# 13. Disposal considerations

# Safe handling and methods for disposal

The generation of waste should be avoided or minimized wherever possible. Recover if possible.

Methods of disposal:

Disposal of this product, solutions, packaging and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Dispose of surplus and nonrecyclable products via a licensed waste disposal contractor.

Do not dispose of waste into sewers.

Disposal considerations:

Do not allow to enter drains or watercourses.

Dispose of product according to all federal, state and local applicable regulations.

If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned.

Dispose of containers contaminated by the product in accordance with local or national legal provisions. For further information, contact your local waste authority.

Special precautions:

This material and its container must be disposed of in a safe way. Care should be taken when handling untreated empty containers. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Empty containers or liners may retain some product residues. Do not re-use empty containers.

# 14. Transport information

# UN number

TDG-UN number: UN1760 ADR-UN number: 1760 DOT-UN Number: UN1760 IATA-Un number: 1760 IMDG-Un number: 1760

#### **UN proper shipping name**

TDG-Shipping Name: CORROSIVE LIQUID, N.O.S. (polyamides - triethylenetetramine) ADR-Shipping Name: CORROSIVE LIQUID, N.O.S. (polyamides - triethylenetetramine) DOT-Proper Shipping Name: Corrosive liquids, n.o.s. (polyamides - triethylenetetramine) IATA-Technical name: CORROSIVE LIQUID, N.O.S. (polyamides - triethylenetetramine) IMDG-Technical name: CORROSIVE LIQUID, N.O.S. (polyamides - triethylenetetramine)

# Transport hazard class(es)

TDG-Class: 8

ADR-Class: 8 DOT-Hazard Class: 8

IATA-Class: 8

IMDG-Class: 8

#### Packing group

TDG-Packing Group: III ADR-Packing Group: III DOT Packing Group: III IATA-Packing group: III IMDG-Packing group: III

#### **Environmental hazards**

Marine pollutant: No Environmental Pollutant: Not Applicable DOT-RO: No

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

Not Applicable

Special precautions in connection with transport or conveyance

# TDG:

TDG Special provisions: 16

Department of Transportation (DOT): DOT-Special Provision(s): IB3, T7, TP1, TP28 DOT-Label(s): 8 DOT-Symbol: N/A DOT-Cargo Aircraft: N/A DOT-Passenger Aircraft: N/A DOT-Bulk: N/A DOT-Non-Bulk: N/A

DOT-Limited Quantity threshold: 5 L

Road and Rail ( ADR-RID ) :

ADR exempt: No

ADR-Label: 8

ADR-Hazard identification number: 80

ADR-Transport category (Tunnel restriction code): 3 (E)

# Air (IATA):

IATA-Passenger Aircraft: 852 IATA-Cargo Aircraft: 856 IATA-Label: 8

IATA-Subsidiary hazards: -

# IATA-Erg: 8L

IATA-Special Provisioning: A3 A803

# Sea ( IMDG ) :

IMDG-Stowage Code: Category A SW2 IMDG-Stowage Note: -

IMDG-Subsidiary hazards: -

IMDG-Special Provisioning: 223 274 IMDG-EMS: F-A, S-B

# 15. Regulatory information

# **Canada - Federal regulations**

DSL - Domestic Substances List

| DSL - D | Domestic Substances List  |                     |                                 |
|---------|---|---------------------|---------------------------------|
|         | All the substances are listed in the  | DSL.                |                                 |
| NDSL -  | Non Domestic Substances List  |                     |                                 |
|         | This product complies with NDSL in  | •                   |                                 |
| NPRI -  | National Pollutant Release Inve   | -                   |                                 |
|         | NPRI (National Pollutant Relea  | se Inventory) -     | List of substances listed.      |
|         | No substances listed  |                     |                                 |
| USA -   | Federal regulations   |                     |                                 |
| TSCA -  | Toxic Substances Control Act  |                     |                                 |
|         | All the components are listed on th   | ie ISCA inventory   |                                 |
|         | TSCA listed substances:   |                     |                                 |
|         | polyamido amine; Fatty acids, tall-<br>oil, reaction products with<br>tetraethylenepentamine        | is listed in TSCA   | Section 8D                      |
|         | triethylenetetramine  | is listed in TSCA   | Section 8b                      |
|         | benzyl alcohol; benzenemethanol   | is listed in TSCA   | Section 8b                      |
|         | aminoethylpiperazine; 2-piperazin<br>1-ylethylamine   | - is listed in TSCA | Section 8b                      |
|         | 2,4,6-<br>tri(dimethylaminomethyl)phenol;<br>Mesitol, alpha2,alpha4,alpha6-<br>tris(dimethylamino)- | is listed in TSCA   | Section 8b                      |
|         | tetraethylenepentamine; 3,6,9-<br>triazaundecamethylenediamine                                      | is listed in TSCA   | Section 8b                      |
|         | diethylene triamine; 2,2'-<br>iminodi(ethylamine)   | is listed in TSCA   | Section 8b                      |
| SAKA -  | Superfund Amendments and Re<br>Section 302 - Extremely Hazaro<br>No substances listed               |                     |                                 |
|         | Section 304 - Hazardous substa  | ances:              |                                 |
|         | No substances listed  |                     |                                 |
|         | Section 313 - Toxic chemical lis  | st:                 |                                 |
|         | No substances listed  |                     |                                 |
|         | A - Comprehensive Environmenta  | al Pasnonsa Cor     | mensation and Liability Act     |
| CERCE   | Substance(s) listed under CER   | -                   | inperioacion, and Liability Act |
|         | No substances listed  |                     |                                 |
| CAA - ( | Clean Air Act<br>CAA listed substances:   |                     |                                 |
|         | benzyl alcohol; benzenemethanol   | is listed in CAA    | Section 112(b) - HON            |
|         | tetraethylenepentamine; 3,6,9-<br>triazaundecamethylenediamine                                      | is listed in CAA    | Section 112(b) - HON            |
| CWA -   | Clean Water Act<br>CWA listed substances:   |                     |                                 |
|         | No substances listed  |                     |                                 |
| USA -   | State specific regulations  |                     |                                 |
|         | nia Proposition 65  |                     |                                 |
|         | Substance(s) listed under Calif   | ornia Propositio    | n 65:                           |
|         | No substances listed  | -                   |                                 |
| Massad  | chusetts Right to know  |                     |                                 |
|         | Substance(s) listed under Mass  | achusetts Right     | to know:                        |
|         | triethylenetetramine  | 2                   |                                 |
|         | benzyl alcohol; benzenemethanol   |                     |                                 |
|         | aminoethylpiperazine; 2-piperazin-  | -1-vlethvlamine     |                                 |
|         |   |                     |                                 |

tetraethylenepentamine; 3,6,9-triazaundecamethylenediamine

diethylene triamine; 2,2'-iminodi(ethylamine)

#### Pennsylvania Right to know

#### Substance(s) listed under Pennsylvania Right to know:

triethylenetetramine

benzyl alcohol; benzenemethanol

aminoethylpiperazine; 2-piperazin-1-ylethylamine

tetraethylenepentamine; 3,6,9-triazaundecamethylenediamine

diethylene triamine; 2,2'-iminodi(ethylamine)

# New Jersey Right to know

#### Substance(s) listed under New Jersey Right to know:

triethylenetetramine

aminoethylpiperazine; 2-piperazin-1-ylethylamine

tetraethylenepentamine; 3,6,9-triazaundecamethylenediamine

diethylene triamine; 2,2'-iminodi(ethylamine)

#### 16. Other information

#### Safety Data Sheet dated: 1/22/2025 - version 6

Reasonable care has been taken in the preparation of this information, but the manufacturer makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The manufacturer makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use. The information herein is presented in good faith and believed to be accurate as of the effective date given. It is the buyer's responsibility to ensure that its activities comply with Federal, State or provincial, and local laws.

This document was prepared by a competent person who has received appropriate training.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This SDS cancels and replaces any preceding release.

| Code   | Description   |  |  |  |  |
|--|---|--|--|--|--|
| H302   | Harmful if swallowed.   |  |  |  |  |
| H311   | Toxic in contact with skin.   |  |  |  |  |
| H312   | Harmful in contact with skin.   |  |  |  |  |
| H314   | Causes severe skin burns and eye damage.  |  |  |  |  |
| H317   | May cause an allergic skin reaction.  |  |  |  |  |
| H318   | Causes serious eye damage.  |  |  |  |  |
| H319   | Causes serious eye irritation.  |  |  |  |  |
| H330   | Fatal if inhaled.   |  |  |  |  |
| H335   | May cause respiratory irritation.   |  |  |  |  |
| H361   | Suspected of damaging fertility or the unborn child.  |  |  |  |  |
| H372   | Causes damage to organs through prolonged or repeated exposure if inhaled.                            |  |  |  |  |
| H411   | Toxic to aquatic life with long lasting effects.  |  |  |  |  |
| H412   | Harmful to aquatic life with long lasting effects.  |  |  |  |  |
| Code   | Hazard class and hazard category  | Description  |  |  |  |
| A.1/2/Inhal  | Acute Tox. 2  | Acute toxicity (inhalation), Category 2  |  |  |  |
| A.1/3/Dermal   | Acute Tox. 3  | Acute toxicity (dermal), Category 3  |  |  |  |
| A.1/4/Dermal   | Acute Tox. 4  | Acute toxicity (dermal), Category 4  |  |  |  |
| A.1/4/Oral   |   |  |  |  |  |
|  | Acute Tox. 4  | Acute toxicity (oral), Category 4  |  |  |  |
| A.2/1B   | Acute Tox. 4<br>Skin Corr. 1B   | Acute toxicity (oral), Category 4<br>Skin corrosion, Category 1B   |  |  |  |
| A.2/1B<br>A.2/1C                                       |   |  |  |  |  |
|  | Skin Corr. 1B   | Skin corrosion, Category 1B  |  |  |  |
| A.2/1C   | Skin Corr. 1B<br>Skin Corr. 1C  | Skin corrosion, Category 1B<br>Skin corrosion, Category 1C   |  |  |  |
| A.2/1C<br>A.3/1  | Skin Corr. 1B<br>Skin Corr. 1C<br>Eye Dam. 1  | Skin corrosion, Category 1B<br>Skin corrosion, Category 1C<br>Serious eye damage, Category 1   |  |  |  |
| A.2/1C<br>A.3/1<br>A.3/2A                              | Skin Corr. 1B<br>Skin Corr. 1C<br>Eye Dam. 1<br>Eye Irrit. 2A   | Skin corrosion, Category 1B<br>Skin corrosion, Category 1C<br>Serious eye damage, Category 1<br>Eye irritation, Category 2A  |  |  |  |
| A.2/1C<br>A.3/1<br>A.3/2A<br>A.4.2/1                   | Skin Corr. 1B<br>Skin Corr. 1C<br>Eye Dam. 1<br>Eye Irrit. 2A<br>Skin Sens. 1                         | Skin corrosion, Category 1B<br>Skin corrosion, Category 1C<br>Serious eye damage, Category 1<br>Eye irritation, Category 2A<br>Skin Sensitization, Category 1  |  |  |  |
| A.2/1C<br>A.3/1<br>A.3/2A<br>A.4.2/1<br>A.7/2          | Skin Corr. 1B<br>Skin Corr. 1C<br>Eye Dam. 1<br>Eye Irrit. 2A<br>Skin Sens. 1<br>Repr. 2              | Skin corrosion, Category 1B<br>Skin corrosion, Category 1C<br>Serious eye damage, Category 1<br>Eye irritation, Category 2A<br>Skin Sensitization, Category 1<br>Reproductive toxicity, Category 2   |  |  |  |
| A.2/1C<br>A.3/1<br>A.3/2A<br>A.4.2/1<br>A.7/2<br>A.8/3 | Skin Corr. 1B<br>Skin Corr. 1C<br>Eye Dam. 1<br>Eye Irrit. 2A<br>Skin Sens. 1<br>Repr. 2<br>STOT SE 3 | Skin corrosion, Category 1B<br>Skin corrosion, Category 1C<br>Serious eye damage, Category 1<br>Eye irritation, Category 2A<br>Skin Sensitization, Category 1<br>Reproductive toxicity, Category 2<br>Specific target organ toxicity following single exposure, Category 3 |  |  |  |

Legend to abbreviations and acronyms used in the safety data sheet:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.

IMDG: International Maritime Code for Dangerous Goods.

IATA: International Air Transport Association.

IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO: International Civil Aviation Organization.

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO).

GHS: Globally Harmonized System of Classification and Labeling of Chemicals.

CLP: Classification, Labeling, Packaging.

EINECS: European Inventory of Existing Commercial Chemical Substances.

INCI: International Nomenclature of Cosmetic Ingredients.

CAS: Chemical Abstracts Service (division of the American Chemical Society).

GefStoffVO: Ordinance on Hazardous Substances, Germany.

LC50: Lethal concentration, for 50 percent of test population.

LD50: Lethal dose, for 50 percent of test population.

DNEL: Derived No Effect Level.

PNEC: Predicted No Effect Concentration.

TLV: Threshold Limiting Value.

TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).

STEL: Short Term Exposure limit.

STOT: Specific Target Organ Toxicity.

WGK: German Water Hazard Class.

KSt: Explosion coefficient.

### Paragraphs modified from the previous revision:

- 2. HAZARDS IDENTIFICATION
- 3. COMPOSITION/INFORMATION ON INGREDIENTS
- 4. FIRST AID MEASURES
- 6. ACCIDENTAL RELEASE MEASURES
- 7. HANDLING AND STORAGE
- 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
- 9. PHYSICAL AND CHEMICAL PROPERTIES
- 11. TOXICOLOGICAL INFORMATION
- 12. ECOLOGICAL INFORMATION
- 14. TRANSPORT INFORMATION
- 15. REGULATORY INFORMATION
- 16. OTHER INFORMATION