

# Franklin International

## Material Safety Data Sheet

Product name : GREENchoice Cove Base Adhesive

### 1. Product and company identification

**CAS #** : mixture  
**Address** : Franklin International  
2020 Bruck Street  
Columbus OH 43207  
**Contact person** : Franklin Technical Services  
**Telephone** : (800) 877-4583  
**Emergency phone:** : Franklin Security  
(614) 445-1300  
**Reference number** : 3638  
**Product code** : 3401  
**Date of revision** : 9/29/2010.  
**Print date** : 9/30/2010.  
**Chemtrec (24 Hour)** : (800) 424 - 9300  
**Chemtrec International** : (703) 527 - 3887  
**Product use** : Adhesive  
**Product type** : Solvent free

### 2. Hazards identification

**Physical state** : Liquid. [Paste.]  
**Odor** : Characteristic.  
**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).  
**Emergency overview** : WARNING!  
HARMFUL IF SWALLOWED. MAY CAUSE EYE AND SKIN IRRITATION.  
Harmful if swallowed. Slightly irritating to the eyes and skin. Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.  
**Routes of entry** : Eye contact. Inhalation. Ingestion.  
**Potential acute health effects**  
**Inhalation** : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.  
**Ingestion** : Toxic if swallowed.  
**Skin** : Slightly irritating to the skin. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.  
**Eyes** : Slightly irritating to the eyes. This product may irritate eyes upon contact.  
**Potential chronic health effects**  
**Chronic effects** : No known significant effects or critical hazards.  
**Carcinogenicity** : No known significant effects or critical hazards.  
**Mutagenicity** : No known significant effects or critical hazards.  
**Teratogenicity** : No known significant effects or critical hazards.  
**Developmental effects** : No known significant effects or critical hazards.

## 2. Hazards identification

- Fertility effects** : No known significant effects or critical hazards.
- Target organs** : May cause damage to the following organs: skin, eyes.  
Contains material which may cause damage to the following organs: lungs, upper respiratory tract, central nervous system (CNS), eye, lens or cornea.

### Over-exposure signs/symptoms

- Inhalation** : No specific data.
- Ingestion** : No specific data.
- Skin** : Adverse symptoms may include the following:  
irritation  
redness
- Eyes** : Adverse symptoms may include the following:  
irritation  
watering  
redness

**Medical conditions aggravated by over-exposure** : None known.

See toxicological information (section 11)

## 3. Composition/information on ingredients

### United States

| <u>Name</u>                       | <u>CAS number</u> | <u>%</u> |
|-----------------------------------|-------------------|----------|
| oxydipropyl dibenzoate ethanediol | 27138-31-4        | 1 - 5    |
| 2-diethylaminoethanol             | 107-21-1          | 1 - 5    |
|                                   | 100-37-8          | 1 - 5    |

### Canada

| <u>Name</u>                       | <u>CAS number</u> | <u>%</u> |
|-----------------------------------|-------------------|----------|
| oxydipropyl dibenzoate ethanediol | 27138-31-4        | 1 - 5    |
| 2-diethylaminoethanol             | 107-21-1          | 1 - 5    |
|                                   | 100-37-8          | 1 - 5    |

### Mexico

| <u>Name</u>            | <u>CAS number</u> | <u>UN number</u> | <u>%</u> | <u>IDLH</u> | <u>Classification</u> |          |          |                |
|------------------------|-------------------|------------------|----------|-------------|-----------------------|----------|----------|----------------|
|                        |                   |                  |          |             | <u>H</u>              | <u>F</u> | <u>R</u> | <u>Special</u> |
| 2-diethylaminoethanol  | 100-37-8          | UN1993           | 1 - 5    | 100 ppm     | 1                     | 2        | 0        |                |
| oxydipropyl dibenzoate | 27138-31-4        | Not available.   | 1 - 5    | -           | 2                     | 0        | 0        |                |
| ethanediol             | 107-21-1          | Not available.   | 1 - 5    | -           | 0                     | 1        | 0        |                |

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

## 4. First aid measures

- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
- Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
- Inhalation** : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

## 4 . First aid measures

- Ingestion** : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

## 5 . Fire-fighting measures

- Flammability of the product** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Extinguishing media**
- Suitable** : Use an extinguishing agent suitable for the surrounding fire.
- Not suitable** : None known.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## 6 . Accidental release measures

- Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
- Small spill** : Stop leak if without risk. Move containers from spill area. Dispose of via a licensed waste disposal contractor. Absorb with an inert material.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

## 7 . Handling and storage

- Handling** : Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

## 7. Handling and storage

**Storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

## 8. Exposure controls/personal protection

### United States

| Ingredient            | Exposure limits   |
|-----------------------|---|
| ethanediol            | <b>OSHA PEL 1989 (United States, 3/1989).</b><br>CEIL: 50 ppm<br>CEIL: 125 mg/m <sup>3</sup>  |
| 2-diethylaminoethanol | <b>ACGIH TLV (United States, 1/2008).</b><br>C: 100 mg/m <sup>3</sup> Form: Aerosol<br><b>ACGIH TLV (United States, 1/2008). Absorbed through skin.</b><br>TWA: 2 ppm 8 hour(s).<br>TWA: 9.6 mg/m <sup>3</sup> 8 hour(s).<br><b>OSHA PEL 1989 (United States, 3/1989). Absorbed through skin.</b><br>TWA: 10 ppm 8 hour(s).<br>TWA: 50 mg/m <sup>3</sup> 8 hour(s).<br><b>NIOSH REL (United States, 6/2008). Absorbed through skin.</b><br>TWA: 10 ppm 10 hour(s).<br>TWA: 50 mg/m <sup>3</sup> 10 hour(s).<br><b>OSHA PEL (United States, 11/2006). Absorbed through skin.</b><br>TWA: 10 ppm 8 hour(s).<br>TWA: 50 mg/m <sup>3</sup> 8 hour(s). |

### Canada

| Occupational exposure limits |                 | TWA (8 hours) |                   |       | STEL (15 mins) |                   |       | Ceiling |                   |       |           |
|------------------------------|-----------------|---------------|-------------------|-------|----------------|-------------------|-------|---------|-------------------|-------|-----------|
| Ingredient                   | List name       | ppm           | mg/m <sup>3</sup> | Other | ppm            | mg/m <sup>3</sup> | Other | ppm     | mg/m <sup>3</sup> | Other | Notations |
| 2-diethylaminoethanol        | US ACGIH 1/2008 | 2             | 9.6               | -     | -              | -                 | -     | -       | -                 | -     | [1]       |
|                              | AB 6/2008       | 2             | 9.6               | -     | -              | -                 | -     | -       | -                 | -     | [1]       |
|                              | BC 6/2008       | 2             | -                 | -     | -              | -                 | -     | -       | -                 | -     | [1]       |
|                              | ON 6/2008       | 2             | -                 | -     | -              | -                 | -     | -       | -                 | -     | [1]       |
|                              | QC 6/2008       | 10            | 48                | -     | -              | -                 | -     | -       | -                 | -     | [1]       |
| ethanediol                   | US ACGIH 1/2008 | -             | -                 | -     | -              | -                 | -     | -       | 100               | -     | [a]       |
|                              | AB 6/2008       | -             | -                 | -     | -              | -                 | -     | -       | 100               | -     | [b]       |
|                              | BC 6/2008       | -             | -                 | -     | -              | 100               | -     | -       | -                 | -     | [a]       |
|                              |                 | -             | 10                | -     | -              | 20                | -     | -       | -                 | -     | [c]       |
|                              |                 | -             | -                 | -     | 50             | -                 | -     | -       | -                 | -     | [d]       |
|                              | ON 6/2008       | -             | -                 | -     | -              | -                 | -     | -       | 100               | -     | [d]       |
|                              | QC 6/2008       | -             | -                 | -     | 50             | 127               | -     | -       | -                 | -     | [e]       |

[1]Absorbed through skin.

Form: [a]Aerosol [b]aerosol [c]Particulate [d]Vapour [e]vapour and mist

### Mexico

| Ingredient            | Exposure limits  |
|-----------------------|--|
| ethanediol            | <b>NOM-010-STPS (Mexico, 9/2000).</b><br>LMPE-Pico: 100 mg/m <sup>3</sup>  |
| 2-diethylaminoethanol | <b>NOM-010-STPS (Mexico, 9/2000). Absorbed through skin.</b><br>LMPE-PPT: 10 ppm 8 hour(s).<br>LMPE-PPT: 50 mg/m <sup>3</sup> 8 hour(s). |

Consult local authorities for acceptable exposure limits.

**Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

## 8 . Exposure controls/personal protection

- Engineering measures** : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Personal protection**
- Respiratory** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. 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.
- Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Eyes** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.
- Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

## 9 . Physical and chemical properties

- Physical state** : Liquid. [Paste.]
- Flash point** : Closed cup: >93.333°C (>200°F) [Setaflash.]
- Color** : Beige.
- Odor** : Characteristic.
- pH** : 6 to 8
- Boiling/condensation point** : 100°C (212°F)
- Relative density** : 1.38
- Volatility** : 23.4% (w/w)
- VOC (less water, less exempt solvents)** : 28 g/l

## 10 . Stability and reactivity

- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Hazardous polymerization** : Under normal conditions of storage and use, hazardous polymerization will not occur.
- Conditions to avoid** : No specific data.
- Materials to avoid** : No specific data.
- Incompatibility** : Reactive or incompatible with the following materials: acids and alkalis.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

# 11 . Toxicological information

## United States

### Acute toxicity

| Product/ingredient name | Result                  | Species    | Dose       | Exposure |
|-------------------------|-------------------------|------------|------------|----------|
| 2-diethylaminoethanol   | LD50 Dermal             | Rabbit     | 1260 uL/kg | -        |
|                         | LD50<br>Intraperitoneal | Rat        | 1220 mg/kg | -        |
| ethanediol              | LD50 Oral               | Rat        | 1300 mg/kg | -        |
|                         | LD50 Dermal             | Rabbit     | 9530 uL/kg | -        |
|                         | LD50<br>Intraperitoneal | Rat        | 5010 mg/kg | -        |
|                         | LD50 Intravenous        | Rat        | 3260 mg/kg | -        |
|                         | LD50 Oral               | Rat        | 4700 mg/kg | -        |
|                         | LD50<br>Subcutaneous    | Rat        | 2800 mg/kg | -        |
|                         | LD50 Unreported         | Rat        | 13 gm/kg   | -        |
|                         | LDLo Intravenous        | Rat        | 2800 mg/kg | -        |
|                         | LDLo<br>Intramuscular   | Rat        | 3300 mg/kg | -        |
|                         | TDLo Oral               | Rat        | 1110 mg/kg | -        |
| TDLo Oral               | Rat                     | 5000 mg/kg | -          |          |
| TDLo Oral               | Rat                     | 120 mg/kg  | -          |          |
| TDLo Oral               | Rat                     | 1000 mg/kg | -          |          |
| TDLo<br>Subcutaneous    | Rat                     | 3000 mg/kg | -          |          |

### Chronic toxicity

No known significant effects or critical hazards.

### Irritation/Corrosion

#### Conclusion/Summary

- Skin** : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
- Eyes** : This product may irritate eyes upon contact.
- Respiratory** : Inhalation of oil mist or vapors at elevated temperatures may cause respiratory irritation.

### Sensitizer

No known significant effects or critical hazards.

### Carcinogenicity

#### Classification

| Product/ingredient name | ACGIH | IARC | EPA | NIOSH | NTP | OSHA |
|-------------------------|-------|------|-----|-------|-----|------|
| ethanediol              | A4    | -    | -   | -     | -   | -    |

### Mutagenicity

No known significant effects or critical hazards.

### Teratogenicity

No known significant effects or critical hazards.

### Reproductive toxicity

No known significant effects or critical hazards.

## Canada

### Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|-------------------------|--------|---------|------|----------|
|-------------------------|--------|---------|------|----------|

## 11 . Toxicological information

|                       |                  |            |            |   |
|-----------------------|------------------|------------|------------|---|
| 2-diethylaminoethanol | LD50 Dermal      | Rabbit     | 1260 uL/kg | - |
|                       | LD50             | Rat        | 1220 mg/kg | - |
|                       | Intraperitoneal  |            |            |   |
| ethanediol            | LD50 Oral        | Rat        | 1300 mg/kg | - |
|                       | LD50 Dermal      | Rabbit     | 9530 uL/kg | - |
|                       | LD50             | Rat        | 5010 mg/kg | - |
|                       | Intraperitoneal  |            |            |   |
|                       | LD50 Intravenous | Rat        | 3260 mg/kg | - |
|                       | LD50 Oral        | Rat        | 4700 mg/kg | - |
|                       | LD50             | Rat        | 2800 mg/kg | - |
|                       | Subcutaneous     |            |            |   |
|                       | LD50 Unreported  | Rat        | 13 gm/kg   | - |
|                       | LDLo             | Rat        | 3300 mg/kg | - |
|                       | Intramuscular    |            |            |   |
| LDLo Intravenous      | Rat              | 2800 mg/kg | -          |   |
| TDLo Oral             | Rat              | 1110 mg/kg | -          |   |
| TDLo Oral             | Rat              | 5000 mg/kg | -          |   |
| TDLo Oral             | Rat              | 120 mg/kg  | -          |   |
| TDLo Oral             | Rat              | 1000 mg/kg | -          |   |
| TDLo                  | Rat              | 3000 mg/kg | -          |   |
| Subcutaneous          |                  |            |            |   |

### Chronic toxicity

No known significant effects or critical hazards.

### Irritation/Corrosion

#### Conclusion/Summary

- Skin** : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
- Eyes** : This product may irritate eyes upon contact.
- Respiratory** : Inhalation of oil mist or vapors at elevated temperatures may cause respiratory irritation.

### Sensitizer

No known significant effects or critical hazards.

### Carcinogenicity

#### Classification

| Product/ingredient name | ACGIH | IARC | EPA | NIOSH | NTP | OSHA |
|-------------------------|-------|------|-----|-------|-----|------|
| ethanediol              | A4    | -    | -   | -     | -   | -    |

### Mutagenicity

No known significant effects or critical hazards.

### Teratogenicity

No known significant effects or critical hazards.

### Reproductive toxicity

No known significant effects or critical hazards.

### Mexico

#### Acute toxicity

| Product/ingredient name | Result           | Species    | Dose       | Exposure |
|-------------------------|------------------|------------|------------|----------|
| 2-diethylaminoethanol   | LD50 Dermal      | Rabbit     | 1260 uL/kg | -        |
|                         | LD50             | Rat        | 1220 mg/kg | -        |
|                         | Intraperitoneal  |            |            |          |
| ethanediol              | LD50 Oral        | Rat        | 1300 mg/kg | -        |
|                         | LD50 Dermal      | Rabbit     | 9530 uL/kg | -        |
|                         | LD50             | Rat        | 5010 mg/kg | -        |
|                         | Intraperitoneal  |            |            |          |
|                         | LD50 Intravenous | Rat        | 3260 mg/kg | -        |
| LD50 Oral               | Rat              | 4700 mg/kg | -          |          |

## 11 . Toxicological information

|                  |     |            |   |
|------------------|-----|------------|---|
| LD50             | Rat | 2800 mg/kg | - |
| Subcutaneous     |     |            |   |
| LD50 Unreported  | Rat | 13 gm/kg   | - |
| LDLo Intravenous | Rat | 2800 mg/kg | - |
| LDLo             | Rat | 3300 mg/kg | - |
| Intramuscular    |     |            |   |
| TDLo Oral        | Rat | 1110 mg/kg | - |
| TDLo Oral        | Rat | 5000 mg/kg | - |
| TDLo Oral        | Rat | 120 mg/kg  | - |
| TDLo             | Rat | 3000 mg/kg | - |
| Subcutaneous     |     |            |   |
| TDLo Oral        | Rat | 1000 mg/kg | - |

### Chronic toxicity

No known significant effects or critical hazards.

### Irritation/Corrosion

#### Conclusion/Summary

**Skin** : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

**Eyes** : This product may irritate eyes upon contact.

**Respiratory** : Inhalation of oil mist or vapors at elevated temperatures may cause respiratory irritation.

### Sensitizer

No known significant effects or critical hazards.

### Carcinogenicity

#### Classification

| Product/ingredient name | ACGIH | IARC | EPA | NIOSH | NTP | OSHA |
|-------------------------|-------|------|-----|-------|-----|------|
| ethanediol              | A4    | -    | -   | -     | -   | -    |

### Mutagenicity

No known significant effects or critical hazards.

### Teratogenicity

No known significant effects or critical hazards.

### Reproductive toxicity

No known significant effects or critical hazards.

## 12 . Ecological information

**Environmental effects** : No known significant effects or critical hazards.

### United States

#### Aquatic ecotoxicity

| Product/ingredient name | Test | Result   | Species  | Exposure |
|-------------------------|------|--|--|----------|
| 2-diethylaminoethanol   | -    | Acute LC50 1780000 to 1920000 ug/L Fresh water | Fish - Fathead minnow - Pimephales promelas - 37 days - 23.5 mm - 0.19 g | 96 hours |
| ethanediol              | -    | Acute LC50 >18500 mg/L Fresh water             | Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss               | 96 hours |
|                         | -    | Acute LC50 41 to 47 ml/L Fresh water           | Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss - 0.7 g       | 96 hours |
|                         | -    | Acute LC50 16 to 18 ml/L Fresh water           | Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss - 1.1 g       | 96 hours |

## 12 . Ecological information

|   |  |  |          |
|---|--|--|----------|
| - | Acute LC50 27540 mg/L<br>Fresh water                   | Fish - Bluegill - Lepomis<br>macrochirus - Juvenile<br>(Fledgling, Hatchling,<br>Weanling) - 0.85 g  | 96 hours |
| - | Acute LC50 22600000 to<br>26500000 ug/L Fresh<br>water | Daphnia - Water flea -<br>Ceriodaphnia dubia -<br>Neonate  | 48 hours |
| - | Acute LC50 13900000 to<br>16600000 ug/L Fresh<br>water | Daphnia - Water flea -<br>Ceriodaphnia dubia -<br>Neonate  | 48 hours |
| - | Acute LC50 13140000<br>ug/L Fresh water                | Daphnia - Water flea -<br>Ceriodaphnia dubia - <=24<br>hours   | 48 hours |
| - | Acute LC50 10500000 to<br>12700000 ug/L Fresh<br>water | Daphnia - Water flea -<br>Ceriodaphnia dubia -<br>Neonate  | 48 hours |
| - | Acute LC50 >10000000<br>ug/L Fresh water               | Fish - Fathead minnow -<br>Pimephales promelas   | 96 hours |
| - | Acute LC50 >10000000<br>ug/L Fresh water               | Daphnia - Water flea -<br>Daphnia magna  | 48 hours |
| - | Acute LC50 10000000 to<br>12300000 ug/L Fresh<br>water | Daphnia - Water flea -<br>Ceriodaphnia dubia -<br>Neonate  | 48 hours |
| - | Acute LC50 8050000 ug/L<br>Fresh water                 | Fish - Fathead minnow -<br>Pimephales promelas - <=7<br>days   | 96 hours |
| - | Acute LC50 6900000 to<br>8800000 ug/L Fresh water      | Daphnia - Water flea -<br>Ceriodaphnia dubia -<br>Neonate  | 48 hours |
| - | Acute LC50 >100000 ug/L<br>Marine water                | Crustaceans - Common<br>shrimp, sand shrimp -<br>Crangon crangon - Adult   | 48 hours |
| - | Acute LC50 1000000000<br>ug/L Marine water             | Crustaceans - Common<br>shrimp, sand shrimp -<br>Crangon crangon   | 48 hours |
| - | Acute LC50 53000000 to<br>56000000 ug/L Fresh<br>water | Fish - Fathead minnow -<br>Pimephales promelas -<br>FRY - 10 to 15 days - 9.5<br>mm - 11.6 mg  | 96 hours |
| - | Acute LC50 25500000 to<br>29800000 ug/L Fresh<br>water | Daphnia - Water flea -<br>Ceriodaphnia dubia -<br>Neonate  | 48 hours |
| - | Acute LC50 49000000 to<br>60000000 ug/L Fresh<br>water | Fish - Fathead minnow -<br>Pimephales promelas -<br>Juvenile (Fledgling,<br>Hatchling, Weanling) - 30<br>to 35 days - 14.9 mm - 76.8<br>mg | 96 hours |
| - | Chronic NOEC 6090000<br>ug/L Fresh water               | Fish - Fathead minnow -<br>Pimephales promelas - <=7<br>days   | 96 hours |
| - | Chronic NOEC 24000000<br>ug/L Fresh water              | Daphnia - Water flea -<br>Ceriodaphnia dubia - <=24<br>hours   | 48 hours |
| - | Chronic NOEC 11610000<br>ug/L Fresh water              | Daphnia - Water flea -<br>Ceriodaphnia dubia - <=24<br>hours   | 48 hours |
| - | Chronic NOEC 39140000<br>ug/L Fresh water              | Fish - Fathead minnow -<br>Pimephales promelas - <=7<br>days   | 96 hours |

## 12 . Ecological information

### Biodegradability

No known significant effects or critical hazards.

### Canada

#### Aquatic ecotoxicity

| Product/ingredient name | Test   | Result   | Species  | Exposure |
|-------------------------|--|--|--|----------|
| 2-diethylaminoethanol   | -  | Acute LC50 1780000 to 1920000 ug/L Fresh water                                       | Fish - Fathead minnow - Pimephales promelas - 37 days - 23.5 mm - 0.19 g                   | 96 hours |
| ethanediol              | -  | Acute LC50 >18500 mg/L Fresh water   | Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss                                 | 96 hours |
|                         | -  | Acute LC50 41 to 47 ml/L Fresh water   | Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss - 0.7 g                         | 96 hours |
|                         | -  | Acute LC50 16 to 18 ml/L Fresh water   | Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss - 1.1 g                         | 96 hours |
|                         | -  | Acute LC50 27540 mg/L Fresh water  | Fish - Bluegill - Lepomis macrochirus - Juvenile (Fledgling, Hatchling, Weanling) - 0.85 g | 96 hours |
|                         | -  | Acute LC50 22600000 to 26500000 ug/L Fresh water                                     | Daphnia - Water flea - Ceriodaphnia dubia - Neonate  | 48 hours |
|                         | -  | Acute LC50 13900000 to 16600000 ug/L Fresh water                                     | Daphnia - Water flea - Ceriodaphnia dubia - Neonate  | 48 hours |
|                         | -  | Acute LC50 13140000 ug/L Fresh water   | Daphnia - Water flea - Ceriodaphnia dubia - <=24 hours                                     | 48 hours |
|                         | -  | Acute LC50 10500000 to 12700000 ug/L Fresh water                                     | Daphnia - Water flea - Ceriodaphnia dubia - Neonate  | 48 hours |
|                         | -  | Acute LC50 >10000000 ug/L Fresh water  | Fish - Fathead minnow - Pimephales promelas  | 96 hours |
|                         | -  | Acute LC50 10000000 to 12300000 ug/L Fresh water                                     | Daphnia - Water flea - Ceriodaphnia dubia - Neonate  | 48 hours |
|                         | -  | Acute LC50 >10000000 ug/L Fresh water  | Daphnia - Water flea - Daphnia magna   | 48 hours |
|                         | -  | Acute LC50 8050000 ug/L Fresh water  | Fish - Fathead minnow - Pimephales promelas - <=7 days                                     | 96 hours |
|                         | -  | Acute LC50 6900000 to 8800000 ug/L Fresh water                                       | Daphnia - Water flea - Ceriodaphnia dubia - Neonate  | 48 hours |
|                         | -  | Acute LC50 >100000 ug/L Marine water   | Crustaceans - Common shrimp, sand shrimp - Crangon crangon - Adult                         | 48 hours |
| -                       | Acute LC50 1000000000 ug/L Marine water          | Crustaceans - Common shrimp, sand shrimp - Crangon crangon                           | 48 hours   |          |
| -                       | Acute LC50 53000000 to 56000000 ug/L Fresh water | Fish - Fathead minnow - Pimephales promelas - FRY - 10 to 15 days - 9.5 mm - 11.6 mg | 96 hours   |          |

## 12 . Ecological information

|   |  |   |          |
|---|--|---|----------|
| - | Acute LC50 25500000 to 29800000 ug/L Fresh water | Daphnia - Water flea - Ceriodaphnia dubia - Neonate   | 48 hours |
| - | Acute LC50 49000000 to 60000000 ug/L Fresh water | Fish - Fathead minnow - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling) - 30 to 35 days - 14.9 mm - 76.8 mg | 96 hours |
| - | Chronic NOEC 6090000 ug/L Fresh water            | Fish - Fathead minnow - Pimephales promelas - <=7 days  | 96 hours |
| - | Chronic NOEC 24000000 ug/L Fresh water           | Daphnia - Water flea - Ceriodaphnia dubia - <=24 hours  | 48 hours |
| - | Chronic NOEC 11610000 ug/L Fresh water           | Daphnia - Water flea - Ceriodaphnia dubia - <=24 hours  | 48 hours |
| - | Chronic NOEC 39140000 ug/L Fresh water           | Fish - Fathead minnow - Pimephales promelas - <=7 days  | 96 hours |

### Biodegradability

No known significant effects or critical hazards.

### Mexico

#### Aquatic ecotoxicity

| Product/ingredient name | Test                                  | Result   | Species  | Exposure |
|-------------------------|---------------------------------------|--|--|----------|
| 2-diethylaminoethanol   | -                                     | Acute LC50 1780000 to 1920000 ug/L Fresh water   | Fish - Fathead minnow - Pimephales promelas - 37 days - 23.5 mm - 0.19 g                   | 96 hours |
| ethanediol              | -                                     | Acute LC50 >18500 mg/L Fresh water               | Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss                                 | 96 hours |
|                         | -                                     | Acute LC50 41 to 47 ml/L Fresh water             | Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss - 0.7 g                         | 96 hours |
|                         | -                                     | Acute LC50 16 to 18 ml/L Fresh water             | Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss - 1.1 g                         | 96 hours |
|                         | -                                     | Acute LC50 27540 mg/L Fresh water                | Fish - Bluegill - Lepomis macrochirus - Juvenile (Fledgling, Hatchling, Weanling) - 0.85 g | 96 hours |
|                         | -                                     | Acute LC50 22600000 to 26500000 ug/L Fresh water | Daphnia - Water flea - Ceriodaphnia dubia - Neonate  | 48 hours |
|                         | -                                     | Acute LC50 13900000 to 16600000 ug/L Fresh water | Daphnia - Water flea - Ceriodaphnia dubia - Neonate  | 48 hours |
|                         | -                                     | Acute LC50 13140000 ug/L Fresh water             | Daphnia - Water flea - Ceriodaphnia dubia - <=24 hours                                     | 48 hours |
|                         | -                                     | Acute LC50 10500000 to 12700000 ug/L Fresh water | Daphnia - Water flea - Ceriodaphnia dubia - Neonate  | 48 hours |
| -                       | Acute LC50 >10000000 ug/L Fresh water | Fish - Fathead minnow - Pimephales promelas      | 96 hours   |          |

## 12 . Ecological information

|   |  |   |          |
|---|--|---|----------|
| - | Acute LC50 >10000000 ug/L Fresh water            | Daphnia - Water flea -<br>Daphnia magna   | 48 hours |
| - | Acute LC50 10000000 to 12300000 ug/L Fresh water | Daphnia - Water flea -<br>Ceriodaphnia dubia -<br>Neonate   | 48 hours |
| - | Acute LC50 8050000 ug/L Fresh water              | Fish - Fathead minnow -<br>Pimephales promelas - <=7 days   | 96 hours |
| - | Acute LC50 6900000 to 8800000 ug/L Fresh water   | Daphnia - Water flea -<br>Ceriodaphnia dubia -<br>Neonate   | 48 hours |
| - | Acute LC50 >100000 ug/L Marine water             | Crustaceans - Common shrimp, sand shrimp -<br>Crangon crangon - Adult   | 48 hours |
| - | Acute LC50 1000000000 ug/L Marine water          | Crustaceans - Common shrimp, sand shrimp -<br>Crangon crangon   | 48 hours |
| - | Acute LC50 53000000 to 56000000 ug/L Fresh water | Fish - Fathead minnow -<br>Pimephales promelas -<br>FRY - 10 to 15 days - 9.5 mm - 11.6 mg  | 96 hours |
| - | Acute LC50 25500000 to 29800000 ug/L Fresh water | Daphnia - Water flea -<br>Ceriodaphnia dubia -<br>Neonate   | 48 hours |
| - | Acute LC50 49000000 to 60000000 ug/L Fresh water | Fish - Fathead minnow -<br>Pimephales promelas -<br>Juvenile (Fledgling, Hatchling, Weanling) - 30 to 35 days - 14.9 mm - 76.8 mg | 96 hours |
| - | Chronic NOEC 6090000 ug/L Fresh water            | Fish - Fathead minnow -<br>Pimephales promelas - <=7 days   | 96 hours |
| - | Chronic NOEC 24000000 ug/L Fresh water           | Daphnia - Water flea -<br>Ceriodaphnia dubia - <=24 hours   | 48 hours |
| - | Chronic NOEC 11610000 ug/L Fresh water           | Daphnia - Water flea -<br>Ceriodaphnia dubia - <=24 hours   | 48 hours |
| - | Chronic NOEC 39140000 ug/L Fresh water           | Fish - Fathead minnow -<br>Pimephales promelas - <=7 days   | 96 hours |

### Biodegradability

No known significant effects or critical hazards.

**Other adverse effects** : No known significant effects or critical hazards.

## 13 . Disposal considerations

**Waste disposal** : The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions 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. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

**Disposal should be in accordance with applicable regional, national and local laws and regulations.**

**Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.**

## 14 . Transport information

| Regulatory information | UN number      | Proper shipping name | Classes | PG* | Label | Additional information |
|------------------------|----------------|----------------------|---------|-----|-------|------------------------|
| DOT Classification     | Not regulated. | -                    | -       | -   |       | -                      |
| TDG Classification     | Not regulated. | -                    | -       | -   |       | -                      |
| Mexico Classification  | Not regulated. | -                    | -       | -   |       | -                      |
| ADR/RID Class          | Not regulated. | -                    | -       | -   |       | -                      |
| IMDG Class             | Not regulated. | -                    | -       | -   |       | -                      |
| IATA-DGR Class         | Not regulated. | -                    | -       | -   |       | -                      |

PG\* : Packing group

## 15 . Regulatory information

### United States

**HCS Classification** : Toxic material

**U.S. Federal regulations** : TSCA 8(a) PAIR: Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-

**United States inventory (TSCA 8b):** All components are listed or exempted.

TSCA precursor chemical list: 2-diethylaminoethanol

**SARA 302/304/311/312 extremely hazardous substances:** No products were found.

**SARA 302/304 emergency planning and notification:** No products were found.

**SARA 302/304/311/312 hazardous chemicals:** ethanediol; 2-diethylaminoethanol

**SARA 311/312 MSDS distribution - chemical inventory - hazard identification:** No products were found.

**DEA List I Chemicals (Precursor Chemicals)** : Not listed

**DEA List II Chemicals (Essential Chemicals)** : Not listed

### SARA 313

|  | <u>Product name</u> | <u>CAS number</u> | <u>Concentration</u> |
|--|---------------------|-------------------|----------------------|
| <b>Form R - Reporting requirements</b> | : ethanediol        | 107-21-1          | 1 - 5                |
| <b>Supplier notification</b>           | : ethanediol        | 107-21-1          | 1 - 5                |

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

**State regulations** : **Massachusetts Spill:** None of the components are listed.  
**Massachusetts Substances:** The following components are listed: N,N-DIETHYLETHANOLAMINE; ETHYLENE GLYCOL  
**New Jersey Hazardous Substances:** The following components are listed: DIETHYLAMINOETHANOL; ETHYLENE GLYCOL  
**New Jersey Spill:** None of the components are listed.  
**New Jersey Toxic Catastrophe Prevention Act:** None of the components are listed.  
**Pennsylvania RTK Hazardous Substances:** The following components are listed: ETHANOL, 2-(DIETHYLAMINO)-; 1,2-ETHANEDIOL

### Canada

## 15 . Regulatory information

**WHMIS (Canada)** : Class D-1B: Material causing immediate and serious toxic effects (Toxic).  
 Class D-2A: Material causing other toxic effects (Very toxic).  
 Class E: Corrosive material

**Canadian lists** : **CEPA Toxic substances:** None of the components are listed.  
**Canadian ARET:** None of the components are listed.  
**Canadian NPRI:** The following components are listed: Ethylene glycol  
**Alberta Designated Substances:** None of the components are listed.  
**Ontario Designated Substances:** None of the components are listed.  
**Quebec Designated Substances:** None of the components are listed.

**Canada inventory** : Not determined.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

### Mexico

**Classification** :



### International regulations

**International lists** : **Australia inventory (AICS):** Not determined.  
**China inventory (IECSC):** Not determined.  
**Japan inventory:** Not determined.  
**Korea inventory:** Not determined.  
**New Zealand Inventory of Chemicals (NZIoC):** Not determined.  
**Philippines inventory (PICCS):** Not determined.

**Chemical Weapons Convention List Schedule I Chemicals** : Not listed

**Chemical Weapons Convention List Schedule II Chemicals** : Not listed

**Chemical Weapons Convention List Schedule III Chemicals** : Not listed

## 16 . Other information

**Label requirements** : HARMFUL IF SWALLOWED. MAY CAUSE EYE AND SKIN IRRITATION.

**Hazardous Material Information System (U.S.A.)** :

|                  |   |
|------------------|---|
| Health           | 1 |
| Flammability     | 1 |
| Physical hazards | 0 |
|                  |   |

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

**Date of printing** : 9/30/2010.

**Date of issue** : 9/29/2010.

## 16 . Other information

**Date of previous issue** : 9/29/2010.

**Version** : 1

✔ Indicates information that has changed from previously issued version.

### Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.