# Material Safety Data Sheet
**The Dow Chemical Company**

**Product Name:** Dow Brake Fluid 310

**Issue Date:** 10/12/2011
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The Dow Chemical Company encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

## 1. Product and Company Identification

**Product Name**
Dow Brake Fluid 310

**COMPANY IDENTIFICATION**
The Dow Chemical Company
2030 Willard H. Dow Center
Midland, MI 48674
USA

Customer Information Number: 800-258-2436

**EMERGENCY TELEPHONE NUMBER**

**24-Hour Emergency Contact:** 989-636-4400
**Local Emergency Contact:** 989-636-4400

## 2. Hazards Identification

### Emergency Overview
**Color:** Colorless to yellow
**Physical State:** Liquid.
**Odor:** Ether
**Hazards of product:**

CAUTION! May cause eye irritation. Isolate area.

### OSHA Hazard Communication Standard
This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

### Potential Health Effects
**Eye Contact:** May cause slight eye irritation. May cause slight corneal injury.
**Skin Contact:** Brief contact is essentially nonirritating to skin.
**Skin Absorption:** Prolonged skin contact is unlikely to result in absorption of harmful amounts.
**Inhalation:** At room temperature, exposure to vapor is minimal due to low volatility. Mist may cause irritation of upper respiratory tract (nose and throat).

**Ingestion:** Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. May cause nausea and vomiting. May cause abdominal discomfort or diarrhea. May cause dizziness and drowsiness. Oral toxicity is expected to be greater in humans due to triethylene glycol even though tests in animals show a lower degree of toxicity. Oral toxicity is expected to be moderate in humans due to diethylene glycol even though tests with animals show a lower degree of toxicity.
**Effects of Repeated Exposure:** Contains component(s) which have been reported to cause effects on the following organs in humans: Kidney. Gastrointestinal tract. In humans, symptoms may include: Headache. Nausea and/or vomiting. Abdominal discomfort. Contains component(s) which have been reported to cause effects on the following organs in animals: Bladder. Kidney. Liver. Respiratory tract. Testes. Central nervous system. Gastrointestinal tract. Blood.
**Birth Defects/Developmental Effects:** Triethylene glycol did not cause birth defects in animals; reduced fetal body weight effects were seen only at very high doses. Diethylene glycol has caused toxicity to the fetus and some birth defects at maternally toxic, high doses in animals. Other animal studies have not reproduced birth defects even at much higher doses that caused severe maternal toxicity. Contains component(s) which did not cause birth defects in animals; other fetal effects occurred only at doses toxic to the mother.
**Reproductive Effects:** Diethylene glycol did not interfere with reproduction in animal studies except at very high doses.

## 3. Composition Information

| Component | CAS # | Amount |
|---|---|---|
| Triethylene glycol monoethyl ether | 112-50-5 | > 15.0 - < 40.0 % |
| Polyethylene glycol monomethyl ether | 9004-74-4 | > 5.0 - < 50.0 % |
| Triethylene glycol monomethyl ether | 112-35-6 | > 1.0 - < 30.0 % |
| Triethylene glycol monobutyl ether | 143-22-6 | > 1.0 - < 25.0 % |
| Polyethylene glycol monobutyl ether | 9004-77-7 | > 1.0 - < 20.0 % |
| Tetraethylene glycol | 112-60-7 | > 1.0 - < 20.0 % |
| Triethylene glycol | 112-27-6 | > 1.0 - < 20.0 % |
| Pentaethylene glycol | 4792-15-8 | < 25.0 % |
| Diethylene glycol | 111-46-6 | < 5.0 % |
| Diethylene glycol monobutyl ether | 112-34-5 | < 5.0 % |
| Hexaethylene glycol | 2615-15-8 | < 5.0 % |
| Phosphoric acid, monosodium salt | 7558-80-7 | < 5.0 % |
| Poly(ethylene oxide) | 25322-68-3 | < 5.0 % |
| Potassium dihydrogen phosphate (KH2PO4) | 7778-77-0 | < 5.0 % |
| Sodium phosphate | 7601-54-9 | < 5.0 % |
| Tetraethylene glycol monoethyl ether | 5650-20-4 | < 5.0 % |
| Diisopropanolamine | 110-97-4 | < 3.0 % |
| Phosphoric acid | 7664-38-2 | < 1.0 % |
| Sodium hydroxide | 1310-73-2 | < 1.0 % |

## 4. First-aid measures

### Description of first aid measures

**General advice:** First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.
**Inhalation:** Move person to fresh air; if effects occur, consult a physician.
**Skin Contact:** Wash skin with plenty of water.
**Eye Contact:** Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist. Suitable emergency eye wash facility should be available in work area.

**Ingestion:** Do not induce vomiting. Seek medical attention immediately. If person is fully conscious give 1 cup or 8 ounces (240 ml) of water. If medical advice is delayed and if an adult has swallowed several ounces of chemical, then give 3-4 ounces (1/3-1/2 Cup) (90-120 ml) of hard liquor such as 80 proof whiskey. For children, give proportionally less liquor at a dose of 0.3 ounce (1 1/2 tsp.) (8 ml) liquor for each 10 pounds of body weight, or 2 ml per kg body weight [e.g., 1.2 ounce (2 1/3 tbsp.) for a 40 pound child or 36 ml for an 18 kg child].

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

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), no additional symptoms and effects are anticipated.

### Indication of immediate medical attention and special treatment needed

Due to structural analogy and clinical data, this material may have a mechanism of intoxication similar to ethylene glycol. On that basis, treatment similar to ethylene glycol intoxication may be of benefit. In cases where several ounces (60 - 100 ml) have been ingested, consider the use of ethanol and hemodialysis in the treatment. Consult standard literature for details of treatment. If ethanol is used, a therapeutically effective blood concentration in the range of 100 - 150 mg/dl may be achieved by a rapid loading dose followed by a continuous intravenous infusion. Consult standard literature for details of treatment. 4-Methyl pyrazole (Antizol®) is an effective blocker of alcohol dehydrogenase and should be used in the treatment of ethylene glycol (EG), di- or triethylene glycol (DEG, TEG), ethylene glycol butyl ether (EGBE), or methanol intoxication if available. Fomepizole protocol (Brent, J. et al., New England Journal of Medicine, Feb. 8, 2001, 344:6, p. 424-9): loading dose 15 mg/kg intravenously, follow by bolus dose of 10 mg/kg every 12 hours; after 48 hours, increase bolus dose to 15 mg/kg every 12 hours. Continue fomepizole until serum methanol, EG, DEG, TEG or EGBE are undetectable. The signs and symptoms of poisoning include anion gap metabolic acidosis, CNS depression, renal tubular injury, and possible late stage cranial nerve involvement. Respiratory symptoms, including pulmonary edema, may be delayed. Persons receiving significant exposure should be observed 24-48 hours for signs of respiratory distress. In severe poisoning, respiratory support with mechanical ventilation and positive end expiratory pressure may be required. Maintain adequate ventilation and oxygenation of the patient. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

## 5. Fire Fighting Measures

### Suitable extinguishing media

Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.
**Extinguishing Media to Avoid:** Do not use direct water stream. May spread fire.

### Special hazards arising from the substance or mixture

**Hazardous Combustion Products:** During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide. Combustion products may include trace amounts of: Nitrogen oxides.
**Unusual Fire and Explosion Hazards:** Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.

### Advice for firefighters

**Fire Fighting Procedures:** Keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound

from venting safety device or discoloration of the container. Burning liquids may be extinguished by dilution with water. Do not use direct water stream. May spread fire. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage.
**Special Protective Equipment for Firefighters:** Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

## 6. Accidental Release Measures

**Personal precautions, protective equipment and emergency procedures:** Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to Section 7, Handling, for additional precautionary measures. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

**Environmental precautions:** Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

**Methods and materials for containment and cleaning up:** Contain spilled material if possible. Absorb with materials such as: Cat litter. Sand. Sawdust. Collect in suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

## 7. Handling and Storage

### Handling
**General Handling:** Avoid contact with eyes. Wash thoroughly after handling. Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

### Storage
Do not store in: Copper. Store in tightly closed, properly vented containers. Store in a dry place. Store indoors. Store away from direct sunlight.
**Shelf life: Use within** 24 Months
**Storage temperature:** 5 - 35 °C

## 8. Exposure Controls / Personal Protection

**Exposure Limits**

| Component | List | Type | Value |
|---|---|---|---|
| **Diethylene glycol** | AIHA WEEL | TWA | 10 mg/m3 |
| **Poly(ethylene oxide)** | AIHA WEEL | TWA Particulate. | 10 mg/m3 |
| **Triethylene glycol** | Dow IHG | TWA Total | 100 mg/m3 |
| **Diisopropanolamine** | Dow IHG | TWA | 10 ppm |
| **Diethylene glycol monobutyl ether** | Dow IHG | TWA | 35 ppm |
| **Tetraethylene glycol** | AIHA WEEL<br>AIHA WEEL | TWA<br>TWA Particulate. | 10 mg/m3<br>10 mg/m3 |

| | | | |
|---|---|---|---|
| **Pentaethylene glycol** | AIHA WEEL | TWA Particulate. | 10 mg/m3 |
| **Sodium hydroxide** | ACGIH<br>OSHA Table Z-1 | Ceiling<br>PEL | 2 mg/m3<br>2 mg/m3 |
| **Phosphoric acid** | ACGIH<br>ACGIH<br>OSHA Table Z-1 | TWA<br>STEL<br>PEL | 1 mg/m3<br>3 mg/m3<br>1 mg/m3 |
| **Hexaethylene glycol** | AIHA WEEL | TWA Particulate. | 10 mg/m3 |

### Personal Protection

**Eye/Face Protection:** Use chemical goggles.

**Skin Protection:** Wear clean, body-covering clothing.

**Hand protection:** Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. Examples of preferred glove barrier materials include: Butyl rubber. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl chloride ("PVC" or "vinyl"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

**Respiratory Protection:** Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. In misty atmospheres, use an approved particulate respirator. The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

**Ingestion:** Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating.

### Engineering Controls

**Ventilation:** Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

## 9. Physical and Chemical Properties

| | |
|---|---|
| **Appearance** | |
| **Physical State** | Liquid. |
| **Color** | Colorless to yellow |
| **Odor** | Ether |
| **Odor Threshold** | No test data available |
| **pH** | 9.5 *Estimated.* |
| **Melting Point** | No test data available |
| **Freezing Point** | No test data available |
| **Boiling Point (760 mmHg)** | 262 °C (504 °F) *Literature* Equilibrium Reflux Boiling Point, dry. 150 °C (302 °F) *FMVSS 116* Equilibrium Reflux Boiling Point, wet. |
| **Flash Point - Closed Cup** | 135 °C (275 °F) *Pensky-Martens Closed Cup ASTM D 93* |
| **Evaporation Rate (Butyl Acetate = 1)** | No test data available |
| **Flammability (solid, gas)** | No |

| | |
|---|---|
| **Flammable Limits In Air** | **Lower**: No test data available<br>**Upper**: No test data available |
| **Vapor Pressure** | No test data available |
| **Vapor Density (air = 1)** | 6 *Estimated.* |
| **Specific Gravity (H2O = 1)** | 1.04 *Estimated.* |
| **Solubility in water (by weight)** | No test data available |
| **Partition coefficient, n-octanol/water (log Pow)** | No data available for this product. See Section 12 for individual component data. |
| **Autoignition Temperature** | No test data available |
| **Decomposition Temperature** | No test data available |
| **Kinematic Viscosity** | 930 mm2/s @ -40 °C *Estimated.* |
| **Explosive properties** | no data available |
| **Oxidizing properties** | no data available |
| **Molecular Weight** | No test data available |
| **Volatile Organic Compounds** | No test data available |

## 10. Stability and Reactivity

### Reactivity
No dangerous reaction known under conditions of normal use.

### Chemical stability
Stable under recommended storage conditions. See Storage, Section 7.

### Possibility of hazardous reactions
Polymerization will not occur.

**Conditions to Avoid:** Do not distill to dryness. Product can oxidize at elevated temperatures. Generation of gas during decomposition can cause pressure in closed systems.

**Incompatible Materials:** Avoid contact with: Strong acids. Strong bases. Strong oxidizers.

### Hazardous decomposition products
Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Aldehydes. Ketones. Organic acids. Decomposition products can include trace amounts of: Nitrogen oxides.

## 11. Toxicological Information

### Acute Toxicity
**Ingestion**
As product: Single dose oral LD50 has not been determined.
Diethylene glycol. Lethal Dose, Human, adult 2 Ounces
**Dermal**
As product: The dermal LD50 has not been determined.
**Inhalation**
As product: The LC50 has not been determined.
### Eye damage/eye irritation
May cause slight eye irritation. May cause slight corneal injury.
### Skin corrosion/irritation
Brief contact is essentially nonirritating to skin.
### Sensitization
**Skin**

No relevant information found.

**Respiratory**

No relevant information found.

### Repeated Dose Toxicity

Contains component(s) which have been reported to cause effects on the following organs in humans: Kidney. Gastrointestinal tract. In humans, symptoms may include: Headache. Nausea and/or vomiting. Abdominal discomfort. Contains component(s) which have been reported to cause effects on the following organs in animals: Bladder. Kidney. Liver. Respiratory tract. Testes. Central nervous system. Gastrointestinal tract. Blood.

### Chronic Toxicity and Carcinogenicity

Diethylene glycol has been tested for carcinogenicity in animal studies and is not believed to pose a carcinogenic risk to man. Contains component(s) which did not cause cancer in laboratory animals.

### Developmental Toxicity

Triethylene glycol did not cause birth defects in animals; reduced fetal body weight effects were seen only at very high doses. Diethylene glycol has caused toxicity to the fetus and some birth defects at maternally toxic, high doses in animals. Other animal studies have not reproduced birth defects even at much higher doses that caused severe maternal toxicity. Contains component(s) which did not cause birth defects in animals; other fetal effects occurred only at doses toxic to the mother.

### Reproductive Toxicity

Diethylene glycol did not interfere with reproduction in animal studies except at very high doses. Contains component(s) which did not interfere with reproduction in animal studies.

### Genetic Toxicology

Contains a component(s) which were negative in in vitro genetic toxicity studies. Contains component(s) which were negative in animal genetic toxicity studies.

## 12. Ecological Information

### Toxicity

Data for Component: **Triethylene glycol monoethyl ether**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

**Fish Acute & Prolonged Toxicity**

LC50, fathead minnow (Pimephales promelas), static, 96 h: > 10,000 mg/l

**Aquatic Invertebrate Acute Toxicity**

LC50, water flea Daphnia magna, static, 48 h, mortality: > 10,000 mg/l

**Toxicity to Micro-organisms**

EC50; bacteria, static, 16 h: > 10,000 mg/l

Data for Component: **Polyethylene glycol monomethyl ether**

For this family of materials: Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

**Fish Acute & Prolonged Toxicity**

For this family of materials: For this family of materials: LC50, fathead minnow (Pimephales promelas), 96 h: > 10,000 mg/l

**Aquatic Invertebrate Acute Toxicity**

For this family of materials: For this family of materials: LC50, water flea Daphnia magna, 48 h: > 10,000 mg/l

Data for Component: **Triethylene glycol monomethyl ether**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

**Fish Acute & Prolonged Toxicity**

LC50, zebra fish (Brachydanio rerio), static, 96 h: > 5,000 mg/l

**Aquatic Invertebrate Acute Toxicity**

EC50, water flea Daphnia magna, static, 48 h, immobilization: > 500 mg/l

**Aquatic Plant Toxicity**

ErC50, Scenedesmus subspicatus (new name: Desmodesmus subspicatus), static, Growth rate inhibition, 72 h: > 500 mg/l

**Toxicity to Micro-organisms**

EC0, EU Method C.11 (Biodegradation: Activated Sludge Respiration Inhibition Test); activated sludge, static, 0.5 h: > 2,000 mg/l

Data for Component: **Triethylene glycol monobutyl ether**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

**Fish Acute & Prolonged Toxicity**

LC50, golden orfe (Leuciscus idus), static, 96 h: 2,200 - 4,600 mg/l

**Aquatic Invertebrate Acute Toxicity**

EC50, water flea Daphnia magna, static, 48 h, immobilization: > 500 mg/l

**Aquatic Plant Toxicity**

NOEC, Scenedesmus subspicatus (new name: Desmodesmus subspicatus), static, Growth rate inhibition, 72 h: 62.5 mg/l

**Toxicity to Micro-organisms**

IC50; bacteria, static, 16 h: > 5,000 mg/l

Data for Component: **Polyethylene glycol monobutyl ether**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

**Fish Acute & Prolonged Toxicity**

Based on information for a similar material: LC50, Fish, static renewal, 96 h: > 1,800 mg/l

**Aquatic Invertebrate Acute Toxicity**

Based on information for a similar material: EC50, water flea Daphnia magna, static, 48 h, immobilization: > 3,200 mg/l

**Aquatic Plant Toxicity**

Based on information for a similar material: ErC50, Scenedesmus capricornutum (fresh water algae), static, Growth rate inhibition, 72 h: 2,490 mg/l

**Toxicity to Micro-organisms**

IC50; activated sludge, static, 16 h: > 5,000 mg/l

Data for Component: **Tetraethylene glycol**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

**Fish Acute & Prolonged Toxicity**

LC50, rainbow trout (Oncorhynchus mykiss), static, 96 h: > 1,000 mg/l

**Aquatic Invertebrate Acute Toxicity**

LC50, water flea Daphnia magna, static, 48 h, survival: 7,746 mg/l

**Aquatic Plant Toxicity**

EC50, green alga Pseudokirchneriella subcapitata (formerly known as Selenastrum capricornutum), static, biomass growth inhibition, 96 h: > 1,000 mg/l

**Toxicity to Micro-organisms**

EC50; bacteria: 7,500 mg/l

Data for Component: **Triethylene glycol**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

**Fish Acute & Prolonged Toxicity**

LC50, bluegill (Lepomis macrochirus), static, 96 h: > 10,000 mg/l

LC50, fathead minnow (Pimephales promelas), flow-through, 96 h: 69,800 mg/l

**Aquatic Invertebrate Acute Toxicity**

EC50, water flea Daphnia magna, static, 48 h, immobilization: > 10,000 mg/l

**Toxicity to Micro-organisms**

EC50; bacteria, 16 h: > 10,000 mg/l

Data for Component: **Pentaethylene glycol**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

**Fish Acute & Prolonged Toxicity**

LC50, fathead minnow (Pimephales promelas), 96 h: > 50,000 mg/l

**Aquatic Invertebrate Acute Toxicity**

EC50, water flea Daphnia magna, 48 h: > 20,000 mg/l

**Aquatic Plant Toxicity**

EC50, green alga Pseudokirchneriella subcapitata (formerly known as Selenastrum capricornutum), Growth inhibition (cell density reduction), 72 h: > 100 mg/l

**Toxicity to Micro-organisms**

IC50; bacteria, 16 h: > 5,000 mg/l

Data for Component: **Diethylene glycol**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

**Fish Acute & Prolonged Toxicity**

LC50, fathead minnow (Pimephales promelas), flow-through, 96 h: 75,200 mg/l

**Aquatic Invertebrate Acute Toxicity**

EC50, water flea Daphnia magna, 48 h, immobilization: 48,900 mg/l

**Aquatic Plant Toxicity**

EC50, green alga Pseudokirchneriella subcapitata (formerly known as Selenastrum capricornutum), biomass growth inhibition, 96 h: > 100 mg/l

**Toxicity to Micro-organisms**

EC50, OECD 209 Test; activated sludge, 3 h: > 1,000 mg/l

Data for Component: **Diethylene glycol monobutyl ether**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

**Fish Acute & Prolonged Toxicity**

LC50, bluegill (Lepomis macrochirus), static, 96 h: 1,300 mg/l

**Aquatic Invertebrate Acute Toxicity**

EC50, water flea Daphnia magna, static, 48 h, immobilization: > 100 mg/l

**Aquatic Plant Toxicity**

ErC50, alga Scenedesmus sp., static, Growth rate inhibition, 96 h: > 100 mg/l

ErC50, alga Scenedesmus sp., static, biomass growth inhibition, 96 h: > 100 mg/l

**Toxicity to Micro-organisms**

EC50; bacteria, static: 255 mg/l

Data for Component: **Hexaethylene glycol**

No relevant data found.

Data for Component: **Phosphoric acid, monosodium salt**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

**Fish Acute & Prolonged Toxicity**

LC50, golden orfe (Leuciscus idus), static, 48 h: > 2,400 mg/l

**Aquatic Invertebrate Acute Toxicity**

LC50, water flea Daphnia magna, 48 h, lethality: 3,580 mg/l

Data for Component: **Poly(ethylene oxide)**

For this family of materials: Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

Data for Component: **Potassium dihydrogen phosphate (KH2PO4)**

Not expected to be acutely toxic to aquatic organisms.

Data for Component: **Sodium phosphate**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

**Fish Acute & Prolonged Toxicity**

LC50, golden orfe (Leuciscus idus), static, 48 h: > 2,400 mg/l

LC50, mosquito fish (Gambusia affinis), 96 h: 152 mg/l

Data for Component: **Tetraethylene glycol monoethyl ether**

No relevant data found.

Data for Component: **Diisopropanolamine**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

**Aquatic Invertebrate Acute Toxicity**

EC50, water flea Daphnia magna, static, 48 h, immobilization: 277.7 mg/l

**Aquatic Plant Toxicity**

EC50, alga Scenedesmus sp., static, Growth rate inhibition, 72 h: 339 mg/l

**Toxicity to Micro-organisms**

EC50; activated sludge, 30 min: > 1,995 mg/l

Data for Component: **Phosphoric acid**

Material is not classified as dangerous to aquatic organisms. May decrease pH of aquatic systems to < pH 5 which may be toxic to aquatic organisms.

Data for Component: **Sodium hydroxide**

May increase pH of aquatic systems to > pH 10 which may be toxic to aquatic organisms.

## Persistence and Degradability

Data for Component: **Triethylene glycol monoethyl ether**

Material is expected to be readily biodegradable. Biodegradation under aerobic static laboratory conditions is high (BOD20 or BOD28/ThOD > 40%).

**OECD Biodegradation Tests:**

| Biodegradation | Exposure Time | Method | 10 Day Window |
|---|---|---|---|
| 92 % | 28 d | OECD 301B Test | pass |

**Indirect Photodegradation with OH Radicals**

| Rate Constant | Atmospheric Half-life | Method |
|---|---|---|
| 4.54E-11 cm3/s | 2.8 h | Estimated. |

**Biological oxygen demand (BOD):**

| BOD 5 | BOD 10 | BOD 20 | BOD 28 |
|---|---|---|---|
| 0 - 8 % | 7 - 47 % | 8 - 71 % | |

Data for Component: **Polyethylene glycol monomethyl ether**

For this family of materials: Biodegradation under aerobic static laboratory conditions is low (BOD20 or BOD28/ThOD between 2.5 and 10%).

Data for Component: **Triethylene glycol monomethyl ether**

Biodegradation under aerobic static laboratory conditions is high (BOD20 or BOD28/ThOD > 40%). Material is ultimately biodegradable (reaches > 70% mineralization in OECD test(s) for inherent biodegradability).

**OECD Biodegradation Tests:**

| Biodegradation | Exposure Time | Method | 10 Day Window |
|---|---|---|---|
| 100 % | 13 d | OECD 301B Test | pass |

**Indirect Photodegradation with OH Radicals**

| Rate Constant | Atmospheric Half-life | Method |
|---|---|---|
| 4.00E-11 cm3/s | 3.2 h | Estimated. |

**Biological oxygen demand (BOD):**

| BOD 5 | BOD 10 | BOD 20 | BOD 28 |
|---|---|---|---|
| 29 % | 33 % | 71 % | |

**Theoretical Oxygen Demand:** 1.75 mg/mg

Data for Component: **Triethylene glycol monobutyl ether**

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Material is ultimately biodegradable (reaches > 70% mineralization in OECD test(s) for inherent biodegradability).

**OECD Biodegradation Tests:**

| Biodegradation | Exposure Time | Method | 10 Day Window |
|---|---|---|---|
| 85 % | 28 d | OECD 301D Test | fail |

**Theoretical Oxygen Demand:** 2.10 mg/mg

Data for Component: **Polyethylene glycol monobutyl ether**

Based on information for a similar material: Material is expected to be readily biodegradable.
**OECD Biodegradation Tests:** Based on information for a similar material:

| Biodegradation | Exposure Time | Method | 10 Day Window |
|---|---|---|---|
| 76 % | 28 d | OECD 301D Test | pass |

**Indirect Photodegradation with OH Radicals**

| Rate Constant | Atmospheric Half-life | Method |
|---|---|---|
| 5.15E-11 cm3/s | 0.21 d | Estimated. |

Data for Component: **Tetraethylene glycol**

Biodegradation under aerobic static laboratory conditions is high (BOD20 or BOD28/ThOD > 40%).

**Indirect Photodegradation with OH Radicals**

| Rate Constant | Atmospheric Half-life | Method |
|---|---|---|
| 5.04E-11 cm3/s | 2.55 h | Estimated. |

**Biological oxygen demand (BOD):**

| BOD 5 | BOD 10 | BOD 20 | BOD 28 |
|---|---|---|---|
| < 2.5 % | 3 % | 43 % | |

**Theoretical Oxygen Demand:** 1.65 mg/mg

Data for Component: **Triethylene glycol**

Material is ultimately biodegradable (reaches > 70% mineralization in OECD test(s) for inherent biodegradability). Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.
**OECD Biodegradation Tests:** Based on analogy.

| Biodegradation | Exposure Time | Method | 10 Day Window |
|---|---|---|---|
| 90 - 100 % | 10 d | OECD 301A Test | pass |
| > 70 % | 2 - 14 d | OECD 302B Test | Not applicable |

**Indirect Photodegradation with OH Radicals**

| Rate Constant | Atmospheric Half-life | Method |
|---|---|---|
| 3.64E-11 cm3/s | 10.6 h | Estimated. |

**Biological oxygen demand (BOD):**

| BOD 5 | BOD 10 | BOD 20 | BOD 28 |
|---|---|---|---|
| 12 - 32 % | 15 - 64 % | 17 - 86 % | |

**Theoretical Oxygen Demand:** 1.60 mg/mg

Data for Component: **Pentaethylene glycol**

Biodegradation under aerobic static laboratory conditions is moderate (BOD20 or BOD28/ThOD between 10 and 40%).

**Indirect Photodegradation with OH Radicals**

| Rate Constant | Atmospheric Half-life | Method |
|---|---|---|
| 6.44E-11 cm3/s | 2 h | Estimated. |

**Biological oxygen demand (BOD):**

| BOD 5 | BOD 10 | BOD 20 | BOD 28 |
|---|---|---|---|
| 3 % | 11 % | 34 % | |

**Chemical Oxygen Demand:** 1.68 mg/mg
**Theoretical Oxygen Demand:** 1.68 mg/mg

Data for Component: **Diethylene glycol**

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Material is ultimately biodegradable (reaches > 70% mineralization in OECD test(s) for inherent biodegradability).
**OECD Biodegradation Tests:** Based on analogy.

| Biodegradation | Exposure Time | Method | 10 Day Window |
|---|---|---|---|
| 90 - 100 % | 20 d | OECD 301A Test | pass |
| 82 - 98 % | 28 d | OECD 302C Test | Not applicable |

**Theoretical Oxygen Demand:** 1.51 mg/mg

Data for Component: **Diethylene glycol monobutyl ether**

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

**OECD Biodegradation Tests:**

| Biodegradation | Exposure Time | Method | 10 Day Window |
|---|---|---|---|
| 89 - 93 % | 28 d | OECD 301C Test | Not applicable |
| 100 % | 28 d | OECD 302B Test | Not applicable |

**Indirect Photodegradation with OH Radicals**

| Rate Constant | Atmospheric Half-life | Method |
|---|---|---|
| 3.62E-11 cm3/s | 11 h | Estimated. |

**Biological oxygen demand (BOD):**

| BOD 5 | BOD 10 | BOD 20 | BOD 28 |
|---|---|---|---|
| 27 % | 60 % | 81 % | |

**Theoretical Oxygen Demand:** 2.17 mg/mg

Data for Component: **Hexaethylene glycol**

No relevant data found.

Data for Component: **Phosphoric acid, monosodium salt**

Biodegradation is not applicable.

Data for Component: **Poly(ethylene oxide)**

For this family of materials: Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

**OECD Biodegradation Tests:** For this family of materials:

| Biodegradation | Exposure Time | Method | 10 Day Window |
|---|---|---|---|
| 48 % | 28 d | OECD 301D Test | fail |

**Biological oxygen demand (BOD):** For this family of materials: For this family of materials:

| BOD 5 | BOD 10 | BOD 20 | BOD 28 |
|---|---|---|---|
| 0 - 17 % | 3 - 56 % | 39 - 77 % | |

**Theoretical Oxygen Demand:** 1.67 - 1.77 mg/mg

Data for Component: **Potassium dihydrogen phosphate (KH2PO4)**

Biodegradation is not applicable.

Data for Component: **Sodium phosphate**

Biodegradation is not applicable.

Data for Component: **Tetraethylene glycol monoethyl ether**

No relevant data found.

Data for Component: **Diisopropanolamine**

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Material is ultimately biodegradable (reaches > 70% mineralization in OECD test(s) for inherent biodegradability).

**OECD Biodegradation Tests:**

| Biodegradation | Exposure Time | Method | 10 Day Window |
|---|---|---|---|
| 94 % | 28 d | OECD 301F Test | pass |

**Indirect Photodegradation with OH Radicals**

| Rate Constant | Atmospheric Half-life | Method |
|---|---|---|
| 1.0169E-10 cm3/s | 0.105 d | Estimated. |

**Biological oxygen demand (BOD):**

| BOD 5 | BOD 10 | BOD 20 | BOD 28 |
|---|---|---|---|
| 3 % | 60 % | 91 % | |

**Chemical Oxygen Demand:** 1.86 mg/mg

**Theoretical Oxygen Demand:** 2.41 mg/mg

Data for Component: **Phosphoric acid**
Biodegradation is not applicable.
**Theoretical Oxygen Demand:** 0.00 mg/mg

Data for Component: **Sodium hydroxide**
Biodegradation is not applicable.

## Bioaccumulative potential

Data for Component: **Triethylene glycol monoethyl ether**
**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
**Partition coefficient, n-octanol/water (log Pow):** -0.6 Estimated.
Data for Component: **Polyethylene glycol monomethyl ether**
**Bioaccumulation:** For this family of materials: No bioconcentration is expected because of the relatively high water solubility.
Data for Component: **Triethylene glycol monomethyl ether**
**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
**Partition coefficient, n-octanol/water (log Pow):** -1.12 Measured
Data for Component: **Triethylene glycol monobutyl ether**
**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
**Partition coefficient, n-octanol/water (log Pow):** 0.51 Measured
Data for Component: **Polyethylene glycol monobutyl ether**
**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
**Partition coefficient, n-octanol/water (log Pow):** 0.436 Measured
Data for Component: **Tetraethylene glycol**
**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
**Partition coefficient, n-octanol/water (log Pow):** -2.02 Estimated.
**Bioconcentration Factor (BCF):** 3.2; fish; Estimated.
Data for Component: **Triethylene glycol**
**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
**Partition coefficient, n-octanol/water (log Pow):** -1.75 Estimated.
Data for Component: **Pentaethylene glycol**
**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
**Partition coefficient, n-octanol/water (log Pow):** -2.30 Estimated.
Data for Component: **Diethylene glycol**
**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
**Partition coefficient, n-octanol/water (log Pow):** -1.98 Estimated.
**Bioconcentration Factor (BCF):** 100; fish; Measured
Data for Component: **Diethylene glycol monobutyl ether**
**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
**Partition coefficient, n-octanol/water (log Pow):** 1 Measured
Data for Component: **Hexaethylene glycol**
**Bioaccumulation:** No relevant data found.
Data for Component: **Phosphoric acid, monosodium salt**
**Bioaccumulation:** Partitioning from water to n-octanol is not applicable.
Partitioning from water to n-octanol is not applicable.
Data for Component: **Poly(ethylene oxide)**
**Bioaccumulation:** For this family of materials: No bioconcentration is expected because of the relatively high water solubility.
Data for Component: **Potassium dihydrogen phosphate (KH2PO4)**
**Bioaccumulation:** Partitioning from water to n-octanol is not applicable.
Partitioning from water to n-octanol is not applicable.
Data for Component: **Sodium phosphate**
**Bioaccumulation:** Partitioning from water to n-octanol is not applicable.
Data for Component: **Tetraethylene glycol monoethyl ether**
**Bioaccumulation:** No relevant data found.
Data for Component: **Diisopropanolamine**
**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
**Partition coefficient, n-octanol/water (log Pow):** -0.79 Measured

Data for Component: **Phosphoric acid**

**Bioaccumulation:** Partitioning from water to n-octanol is not applicable.
Partitioning from water to n-octanol is not applicable.

Data for Component: **Sodium hydroxide**

**Bioaccumulation:** No bioconcentration is expected because of the relatively high water solubility.

### Mobility in soil

Data for Component: **Triethylene glycol monoethyl ether**

**Mobility in soil:** Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process., Potential for mobility in soil is very high (Koc between 0 and 50).
**Partition coefficient, soil organic carbon/water (Koc):** 10 Estimated.
**Henry's Law Constant (H):** 4.77E-14 atm*m3/mole

Data for Component: **Polyethylene glycol monomethyl ether**

**Mobility in soil:** No data available.

Data for Component: **Triethylene glycol monomethyl ether**

**Mobility in soil:** Potential for mobility in soil is very high (Koc between 0 and 50).
**Partition coefficient, soil organic carbon/water (Koc):** 10 Estimated.
**Henry's Law Constant (H):** 2.66E-09 atm*m3/mole; 25 °C Estimated.

Data for Component: **Triethylene glycol monobutyl ether**

**Mobility in soil:** Potential for mobility in soil is very high (Koc between 0 and 50).
**Partition coefficient, soil organic carbon/water (Koc):** 10 Estimated.
**Henry's Law Constant (H):** 6.79E-10 atm*m3/mole; 25 °C Estimated.

Data for Component: **Polyethylene glycol monobutyl ether**

**Mobility in soil:** No data available.

Data for Component: **Tetraethylene glycol**

**Mobility in soil:** Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process., Potential for mobility in soil is very high (Koc between 0 and 50).
**Partition coefficient, soil organic carbon/water (Koc):** 10 Estimated.
**Henry's Law Constant (H):** 3.5E-11 atm*m3/mole; 25 °C Estimated.

Data for Component: **Triethylene glycol**

**Mobility in soil:** Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process., Potential for mobility in soil is very high (Koc between 0 and 50).
**Partition coefficient, soil organic carbon/water (Koc):** 10 Estimated.
**Henry's Law Constant (H):** 4.37E-10 atm*m3/mole; 25 °C Estimated.

Data for Component: **Pentaethylene glycol**

**Mobility in soil:** Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process., Potential for mobility in soil is very high (Koc between 0 and 50).
**Partition coefficient, soil organic carbon/water (Koc):** 10 Estimated.
**Henry's Law Constant (H):** < 2.54E-11 atm*m3/mole; 25 °C Estimated.

Data for Component: **Diethylene glycol**

**Mobility in soil:** Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process., Potential for mobility in soil is very high (Koc between 0 and 50).
**Partition coefficient, soil organic carbon/water (Koc):** < 1 Estimated.
**Henry's Law Constant (H):** 7.96E-10 atm*m3/mole; 25 °C Estimated.

**Distribution in Environment: Mackay Level 1 Fugacity Model:**

| Air | Water. | Biota | Soil | Sediment |
|---|---|---|---|---|
| 0.75 % | 99.25 % | 0 % | 0 % | 0 % |

Data for Component: **Diethylene glycol monobutyl ether**

**Mobility in soil:** Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process., Potential for mobility in soil is very high (Koc between 0 and 50).
**Partition coefficient, soil organic carbon/water (Koc):** 2 Estimated.
**Henry's Law Constant (H):** 1.52E-09 atm*m3/mole; 25 °C Estimated.

Data for Component: **Hexaethylene glycol**
**Mobility in soil:** No relevant data found.
Data for Component: **Phosphoric acid, monosodium salt**
**Mobility in soil:** No relevant data found.
No relevant data found.
Data for Component: **Poly(ethylene oxide)**
**Mobility in soil:** No data available.
Data for Component: **Potassium dihydrogen phosphate (KH2PO4)**
**Mobility in soil:** No relevant data found.
No relevant data found.
Data for Component: **Sodium phosphate**
**Mobility in soil:** No relevant data found.
Data for Component: **Tetraethylene glycol monoethyl ether**
**Mobility in soil:** No relevant data found.
Data for Component: **Diisopropanolamine**
**Mobility in soil:** Potential for mobility in soil is very high (Koc between 0 and 50)., Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.
**Partition coefficient, soil organic carbon/water (Koc):** 43 Estimated.
**Henry's Law Constant (H):** 7.0E-06 Pa*m3/mole. Estimated.
**Distribution in Environment: Mackay Level 1 Fugacity Model:**

| Air | Water. | Biota | Soil | Sediment |
|---|---|---|---|---|
| > 1 % | > 99 % | 0 % | 0 % | 0 % |

Data for Component: **Phosphoric acid**
**Mobility in soil:** No relevant data found.
No relevant data found.
Data for Component: **Sodium hydroxide**
**Mobility in soil:** Potential for mobility in soil is very high (Koc between 0 and 50).
**Partition coefficient, soil organic carbon/water (Koc):** 14 Estimated.

## 13. Disposal Considerations

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device.
**Treatment and disposal methods of used packaging:** Empty containers should be recycled or otherwise disposed of by an approved waste management facility. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. Do not re-use containers for any purpose.

## 14. Transport Information

**DOT Non-Bulk**
NOT REGULATED

**DOT Bulk**
NOT REGULATED

**IMDG**
NOT REGULATED

**ICAO/IATA**
NOT REGULATED

*This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.*

## 15. Regulatory Information

**OSHA Hazard Communication Standard**
This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312**

| | |
|---|---|
| **Immediate (Acute) Health Hazard** | No |
| **Delayed (Chronic) Health Hazard** | No |
| **Fire Hazard** | No |
| **Reactive Hazard** | No |
| **Sudden Release of Pressure Hazard** | No |

**Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313**
This product contains the following substances which are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and which are listed in 40 CFR 372.

| Component | CAS # | Amount |
|---|---|---|
| Triethylene glycol monoethyl ether | 112-50-5 | > 15.0 - < 40.0 % |
| Triethylene glycol monomethyl ether | 112-35-6 | > 1.0 - < 30.0 % |
| Triethylene glycol monobutyl ether | 143-22-6 | > 1.0 - < 25.0 % |
| Diethylene glycol monobutyl ether | 112-34-5 | < 5.0 % |

**Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List:**
The following product components are cited in the Pennsylvania Hazardous Substance List and/or the Pennsylvania Environmental Substance List, and are present at levels which require reporting.

| Component | CAS # | Amount |
|---|---|---|
| Triethylene glycol monoethyl ether | 112-50-5 | > 15.0 - < 40.0 % |
| Triethylene glycol monomethyl ether | 112-35-6 | > 1.0 - < 30.0 % |
| Triethylene glycol monobutyl ether | 143-22-6 | > 1.0 - < 25.0 % |
| Triethylene glycol | 112-27-6 | > 1.0 - < 20.0 % |
| Diethylene glycol | 111-46-6 | < 5.0 % |
| Diethylene glycol monobutyl ether | 112-34-5 | < 5.0 % |
| Sodium phosphate | 7601-54-9 | < 5.0 % |
| Diisopropanolamine | 110-97-4 | < 3.0 % |

**Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Special Hazardous Substances List:**
To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

**US. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)**
The following product components are cited in the New Jersey Environmental Hazardous and Workplace Hazardous Substance Lists:

| Component | CAS # | Amount |
|---|---|---|
| Triethylene glycol monoethyl ether | 112-50-5 | > 15.0 - < 40.0 % |
| Triethylene glycol monomethyl ether | 112-35-6 | > 1.0 - < 30.0 % |
| Triethylene glycol monobutyl ether | 143-22-6 | > 1.0 - < 25.0 % |
| Diethylene glycol monobutyl ether | 112-34-5 | < 5.0 % |
| Sodium phosphate | 7601-54-9 | < 5.0 % |

**US. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)**
The following product components are cited in the New Jersey Special Hazardous Substance List:

| Component | CAS # | Amount |
|---|---|---|
| Phosphoric acid | 7664-38-2 | < 1.0 % |

**California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)**
WARNING: This product contains a chemical(s) known to the State of California to cause cancer.

**California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)**
WARNING: This product contains a chemical(s) known to the State of California to cause birth defects or other reproductive harm.

**US. Toxic Substances Control Act**
All components of this product are either on the TSCA Inventory, are exempt from TSCA Inventory Requirements under 40 CFR 720.30, or comply with the PMN Polymer Exemption 40 CFR 723.250.

## 16. Other Information

### Product Literature
Additional information on this product may be obtained by calling your sales or customer service contact. Ask for a product brochure.

### Recommended Uses and Restrictions
**Identified uses**
A brake fluid - For use in automotive applications.

### Revision
Identification Number: 932 / 0000 / Issue Date 10/12/2011 / Version: 9.0
Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

### Legend

| | |
|---|---|
| N/A | Not available |
| W/W | Weight/Weight |
| OEL | Occupational Exposure Limit |
| STEL | Short Term Exposure Limit |
| TWA | Time Weighted Average |
| ACGIH | American Conference of Governmental Industrial Hygienists, Inc. |
| DOW IHG | Dow Industrial Hygiene Guideline |
| WEEL | Workplace Environmental Exposure Level |
| HAZ_DES | Hazard Designation |
| Action Level | A value set by OSHA that is lower than the PEL which will trigger the need for activities such as exposure monitoring and medical surveillance if exceeded. |

*The Dow Chemical Company urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is*

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