



## Material Safety Data Sheet

### Polyethylene glycol 1000 MSDS

#### Section 1: Chemical Product and Company Identification

Product name: Polyethylene glycol 1000

Catalogue Code: PEG1000

CAS#: 25322-68-3

RTECS:TQ4025000

TSCA: TSCA 8(b) inventory: Polyethylene glycol 1000

CI#: Not available

Synonym: Carbowax 1000; Macrogol 1000; PEG 1000

Chemical Name: Polyethylene Glycol 1000

Chemical Formula:  $\text{H}(\text{OCH}_2\text{CH}_2)_n\text{OH}$

#### **Contact Information:**

Microlytic North America Inc.

300 Trade Center, Suite 3650

Woburn, MA, 01801 USA

US Sales: 781-376-0780

Website:<http://www.microlytic.com>

## **Section 2: Composition and Information in Ingredients**

Composition:

Name	CAS #	Percent by weight
Polyethylene glycol 1000	25322-68-3	50%

**Toxicological Data on Ingredients:** Polyethylene glycol 1000: Acute oral toxicity (LD50): 22500 mg/Kg (Guinea pig); Acute dermal toxicity (LD50): >20000 mg/kg (Rabbit); Acute toxicity of the vapor (LC50): >13.8 hours (Rat).

## **Section 3: Hazards Identification**

**Potential Acute Health Effects:** Slightly hazardous in case of skin contact (irritant, permeator), or eye contact (irritant), of ingestion, of inhalation.

### **Potential Chronic Health Effects:**

CARCINOGENIC EFFECTS: Not available

MUTAGENIC EFFECTS: Not available

TETRATOGENIC EFFECTS: Not available

DEVELOPMENTAL TOXICITY: Not available.

Repeated or prolonged exposure is not known to aggravate medical condition.

## **Section 4: First Aid Measures**

**Eye Contact:** Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention if irritation occurs.

**Skin Contact:** Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops. Cold water may be used.

**Serious Skin Contact:** Not available

**Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**Serious inhalation:** Not available

**Ingestion:** Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

**Serious Ingestion:** Not Available.

### **Section 5: Fire and Explosion Data**

**Flammability of the product:** May be combustible at high temperature

**Auto-Ignition Temperature:** Not available

**Flash Points:** CLOSED CUP: 177°C (350.6 °F). OPEN CUP: 199°C (390.2°F)

**Flammable Limits:** Not available

**Products of Combustion:** These products are carbon oxides (CO, C<sub>2</sub>)

**Fire Hazards in Presence of Various Substances:** Slightly flammable to flammable in presence open flames and sparks, of heat.

**Explosion Hazards in Presence of Various Substances:**

Risks of explosion in the product in presence of mechanical impact: Not available

Risks of explosion in the product in presence of static discharge: Not available

**Fire Fighting Media and instructions:**

SMALL FIRE: Use DRY chemical powder

LARGE FIRE: Use water spray, fog or foam. Do no use water jet.

**Special Remarks on Fire Hazards:** In the solid form, fire is possible at elevated temperatures or by contact with an ignition source. No special remarks for the dissolved form.

**Special Remarks on Explosion Hazards:** Fine dust of the solid form in the air in sufficient concentrations, and in the presence of an ignition source is a potential explosion hazard. Not special remarks for the dissolved form.

## **Section 6: Accidental Release Measures**

### **Small Spill:**

Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

### **Large Spill:**

Absorb with an inert material and put the spilled material in an appropriate waste disposal. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

## **Section 7: Handling and Storage**

### **Precautions:**

Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/vapor/spray. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibilities such as oxidizing agents.

**Storage:** keep container tightly closed. Keep container in a cool, well-ventilated area.

## **Section 8: Exposure Controls/Personal Protection**

### **Engineering Controls:**

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

### **Personal Protection:**

Safety glasses. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

### **Personal Protection in case of a large Spill**

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product

**Exposure Limits:** Not available

### **Section 9: Physical and Chemical Properties**

**Physical state and appearance:** liquid (viscous)

**Odor:** mild odor

**Taste:** Not available

**Molecular Weight:** 1000 g/mole

**Color:** Clear

**pH (1% soln/water):** Not available.

**Boiling Point:** Not available.

**Melting Point (Powder):** 37°C (98.6°F)

**Critical Temperature:** Not available

**Specific Gravity:** 1.12 (water = 1)

**Vapor Pressure:** Not available

**Vapor Density:** Not available

**Volatility:** Not available

**Odor Threshold:** Not available

**Water/Oil Dist. Coefficient:** Not available.

**Ionicity (in water):** Not available.

**Dispersion Properties:** See solubility in water.

**Solubility:** soluble in cold water, hot water. Readily soluble in aromatic hydrocarbons. Slightly soluble in aliphatic hydrocarbons.

### **Section 10: Stability and Reactivity Data**

**Stability:** The product is stable

**Instability Temperature:** Not available.

**Conditions of Instability:** Incompatible materials (strong oxidizing agents), excess heat.

**Incompatibility with various substances:** Reactive with oxidizing agents, acids, alkalis.

**Corrosivity:** Non-corrosive in presence of glass.

**Special Remarks on Reactivity:** Slightly Hygroscopic

**Special Remarks on Corrosivity:** Not available

**Polymerization:** Will not occur.

### **Section 11: Toxicological information**

**Routes of entry:** Absorbed through skin. Eye contact.

#### **Toxicity to Animals:**

Acute oral toxicity (LD50): 22500 mg/Kg (Guinea pig)

Acute dermal toxicity (LD50): >20000 mg/kg (Rabbit)

Acute toxicity of the vapor (LC50): >13.8 hours (Rat)

**Chronic Effects on Humans:** Not available.

**Other Toxic Effects on humans:** Slightly hazardous in case of skin contact (irritant, permeator), of ingestion, of inhalation.

**Special Remarks on Toxicity to Animals:** Not available.

#### **Special Remarks on Other Toxic Effects on Humans:**

Acute Potential Health Effects:

Skin: may cause mild skin irritation. Unlikely to result in absorption of harmful amounts which may cause hypercalcemia and hypokalemia.

Eyes: May cause mild eye irritation. Corneal injury is unlikely

Inhalation: At room temperature, exposure to vapor is minimal due to low volatility. A single exposure is not likely to be hazardous.

Ingestion: May cause gastrointestinal tract irritation with nausea, vomiting, flatulence, diarrhea, taste perversion. Very large doses may affect respiration (respiratory depression), kidneys (oliguria, renal failure, renal tubular necrosis), and liver.

### **Section 12: Ecological Information**

**Ecotoxicity:** Not available

**BOD5 and COD:** Not available

**Products of Biodegradation:** Possible hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Toxicity of the Products of Biodegradation:** The product itself and its products of degradation are not toxic.

**Special Remarks on the Products of Biodegradation:** Not available.

### **Section 13: Disposal Considerations**

**Waste disposal:** Waste must be disposed of in accordance with federal, state and local environmental control regulations.

### **Section 14: Transport Information**

**DOT Classification:** Not a DOT controlled material (United States)

**Identification:** Not applicable

**Special Provisions for Transport:** Not applicable

### **Section 15: Other Regulatory Information**

**Federal Regulations:**

TSCA 8(b) inventory: Polyethylene glycol 1000

**Other Regulations:** Not available

**Other Classifications:**

**WHIMIS (Canada):** Not controlled under WHIMIS (Canada)

**DSCL (EEC):**

Not available

S24/25- Avoid contact with skin and eyes

**HMIS (USA):**

**Health Hazard: 1**

**Fire Hazard: 1**

**Reactivity: 0**

**Personal Protection: E**

**National fire Protection Association (USA):**

**Health: 0**

**Flammability: 1**

**Reactivity: 0**

**Specific Hazard:**

**Protective Equipment:**

**Gloves**

**Lab coat**

**Vapor respirator. Be sure to use an approved/certified respirator or equivalent**

**Safety glasses**

**Section 16: Other information**

**References:** Not available

**Other Special Considerations:** not available

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