

MATERIAL SAFETY DATA SHEET

**POLYETHYLENE GLYCOL 1000**

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**SECTION 1 - PRODUCT IDENTIFICATION AND HAZARDOUS COMPONENTS**

PRODUCT: Polyethylene Glycol 1000

SYNONYMS: Polyoxyethylene 1000, Polyglycol 1000, PEG 1000

MOLECULAR FORMULA: HO-(CH<sub>2</sub>CH<sub>2</sub>O)<sub>n</sub>-H MOLECULAR WEIGHT: 950-1050 (avg.)

CHEMICAL FAMILY: Oxyalkylene Polymer

INGREDIENT\*(CAS #) % OSHA PEL ACGIH TLV

Polyethylene glycol (25322-68-3) >99 5-15 mg/m<sup>3</sup>\* 10 mg/m<sup>3</sup>\*\*

\* Any unlisted ingredients are present at; less than 5%, less than 1% if hazardous, less than 0.1% if carcinogenic.

\*\* OSHA limits: 5 mg/m<sup>3</sup> for respirable dust, 15 mg/m<sup>3</sup> for total dust.

ACGIH limits: 10 mg/m<sup>3</sup> for total dust for nuisance particulates.

**SECTION 2 - PHYSICAL AND CHEMICAL CHARACTERISTICS**

BOILING POINT: >200°C (Decomposes) VAPOR PRESSURE: N/A

MELTING POINT: 37-40°C VAPOR DENSITY: N/A

SPECIFIC GRAVITY: N/A EVAPORATION RATE: N/A  
(WATER = 1) (BUTYL ACETATE = 1)

WATER SOLUBILITY: Soluble. WATER REACTIVE: No.

APPEARANCE AND ODOR: White, slightly translucent, soft, waxy solid with a slight, bland odor.

**SECTION 3 - FIRE AND EXPLOSION DATA**

FLASH POINT (METHOD): >350°F (Penskv-Martens closed cup).

AUTOIGNITION TEMPERATURE: N/A

FLAMMABLE LIMITS: LOWER: N/A      UPPER: N/A

EXTINGUISHING MEDIA: For large fires use an alcohol-type or all-purpose-type foam following manufacturer's directions. For small fires use carbon dioxide or dry chemical media.

SPECIAL FIRE FIGHTING PROCEDURES: Do not direct a solid stream of water or foam into hot, burning pools; this may cause frothing and increase fire intensity. Fire fighters should wear self-contained breathing apparatus and full protective clothing.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Avoid dispersion of dust in air to minimize potential for dust ignition or explosion. May emit toxic fumes when heated to decomposition (as under fire conditions).

**SECTION 4 - REACTIVITY HAZARD DATA**

STABILITY: Stable ( X )    Unstable ( )

INCOMPATIBILITY (MATERIALS TO AVOID): Strong acids, oxidizing materials, and strong bases at high temperatures.

HAZARDOUS DECOMPOSITION PRODUCTS: May liberate carbon monoxide and carbon dioxide if heated to decomposition or burned.

HAZARDOUS POLYMERIZATION: May Occur ( )    Will Not Occur ( X )

**SECTION 5 - HEALTH HAZARD DATA**

TOXICITY: Toxicology studies have shown this material to be of very low acute toxicity and non-irritating, however, an isolated case of an anaphylactic reaction to this material has been reported.

CARCINOGEN LISTED BY:    NTP      Yes ( )    No ( X )  
   IARC      Yes ( )    No ( X )  
   OSHA      Yes ( )    No ( X )  
   Other      Yes ( )    No ( X )

NOTE: Polyethylene glycols did not cause cancer in long term studies, however, this material contains trace levels of acetaldehyde, dioxane, ethylene oxide, and formaldehyde which are considered carcinogens or suspect carcinogens.

ROUTES OF ENTRY: Inhalation, ingestion, absorption.

SIGNS AND SYMPTOMS OF OVEREXPOSURE:

INHALATION: Inhalation of dusts may cause respiratory tract irritation.

SKIN CONTACT: May cause irritation.

INGESTION: May cause irritation of the gastrointestinal tract.

CHRONIC EFFECTS OF OVEREXPOSURE: Prolonged or repeated exposure may cause delayed kidney damage.

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: May cause adverse effects in persons with impaired renal function. Topical applications containing polyethylene glycols may not be suitable for persons with severe burns or impaired renal function.

**EMERGENCY FIRST AID PROCEDURES:**

INHALATION: Remove to fresh air. Give artificial respiration if not breathing. Seek medical attention.

EYE CONTACT: Immediately flush eyes with water for 15 minutes, lifting upper and lower eyelids occasionally. Seek medical attention.

SKIN CONTACT: Wash with water. Seek medical attention if irritation persists or develops.

INGESTION: No treatment necessary in most cases, however, if a large amount is ingested or any symptoms of an anaphylactic reaction develop seek medical attention immediately.

<b>SECTION 6 - CONTROL AND PROTECTIVE MEASURES</b>
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RESPIRATORY PROTECTION: A NIOSH/MSHA-approved respirator appropriate for the emission levels is recommended.

EYE PROTECTION: Safety glasses or goggles. Wearing of contact lenses should be avoided when working with any chemical since this may contribute to the severity of an eye injury.

PROTECTIVE GLOVES: Rubber.

VENTILATION: Local or mechanical as required to maintain airborne levels below that of OSHA and ACGIH standards.

OTHER PROTECTIVE EQUIPMENT: Appropriate laboratory apparel and an eyewash and safety shower.

HYGIENIC WORK PRACTICES: Do not eat, drink or smoke near this material. Wash thoroughly after handling and wash any contaminated clothing before reuse.

<b>SECTION 7 - HANDLING AND STORAGE PRECAUTIONS</b>
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HANDLING PRECAUTIONS: Avoid contact with eyes, skin or clothing. Avoid breathing dust. Wash thoroughly after handling. Wash contaminated clothing before reuse.

STORAGE PRECAUTIONS: Store in a tight, light-resistant container, placed in a cool, dry, well-ventilated area away

OTHER PRECAUTIONS: Empty containers may contain product residue and vapors and should be treated as full.

### **SECTION 8 - SPILL AND DISPOSAL PROCEDURES**

**STEPS TO BE TAKEN IN CASE OF SPILL OR DISCHARGE:** Wear all protective equipment (including respirator, gloves, and goggles). Sweep or vacuum up spillage and place in a tight container. Keep out of sewers, storm drains, surface waters and soil. Comply with all applicable governmental regulations on spill reporting, and handling and disposal of waste.

**WASTE DISPOSAL METHOD:** Dispose of in accordance with all applicable local, state, federal, and environmental regulations.

### **SECTION 9 - DISCLAIMER**

The information contained in this Material Safety Data Sheet has been compiled from reliable sources and is believed to be correct as of the date issued. It is the responsibility of the user to determine the appropriateness and applicability to their situation. Paddock Laboratories, Inc. disclaims any expressed or implied warranty as to the accuracy of the above information and shall not be held liable for any direct, incidental, or consequential damages from use or reliance on the above information.

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#### **DEFINITIONS OF ABBREVIATIONS USED:**

ACGIH: American Conference of Governmental Industrial Hygienists  
CAS: Chemical Abstract Service  
IARC: Internal Agency for Research on Cancer  
IDLH: Immediately Dangerous to Life or Health level  
LC50: Median Lethal Concentration  
LD50: Median Lethal Dose  
N/A: Not available  
NTP: National Toxicology Program  
OSHA: Occupational Safety and Health Administration  
PEL: Permissible Exposure Limit  
STEL: Short Term Exposure Limit  
TLV: Threshold Limit Value