

N-BUTYL GLYCIDYL ETHER

BGE

CAUTIONARY RESPONSE INFORMATION

Common Synonyms 1-Butoxy-2,3-epoxypropane 1,2-Epoxy-3-butoxy propane 2,3-Epoxypropyl butyl ether		Liquid	Colorless to pale yellow	Strong, slightly unpleasant
<p>AVOID CONTACT WITH LIQUID AND VAPOR. Wear rubber over clothing (including gloves) and approved respirator. Shut off ignition sources and call fire department. Notify local health and pollution control agencies. Protect water intakes.</p>				
Fire	<p>COMBUSTIBLE. Wear self-contained breathing apparatus and chemical protective clothing. Extinguish with dry chemical, CO₂, or alcohol foam.</p>			
Exposure	<p>CALL FOR MEDICAL AID. Move victim to fresh air. Remove contaminated clothing and shoes. Wash affected areas with plenty of soap and water. IF IN EYES, hold eyelids open and flush with plenty of water. IF SWALLOWED and victim is CONSCIOUS, induce vomiting.</p>			
Water Pollution	<p>Effects of low concentrations on aquatic life is unknown. May be dangerous if it enters water intakes. Notify local health and wildlife officials. Notify operators of nearby water intakes.</p>			

<p>1. CORRECTIVE RESPONSE ACTIONS Stop discharge Dilute and disperse</p>	<p>2. CHEMICAL DESIGNATIONS 2.1 CG Compatibility Group: Not listed. 2.2 Formula: CH₃(CH₂)₃OCH₂CHOCH₂ 2.3 IMO/UN Designation: Not listed. 2.4 DOT ID No.: Not listed. 2.5 CAS Registry No.: 2426-08-6 2.6 NAERG Guide No.: Not listed 2.7 Standard Industrial Trade Classification: 51616</p>
<p>3. HEALTH HAZARDS</p> <p>3.1 Personal Protective Equipment: Chemical protective clothing, gloves, face shields, and approved respirator. 3.2 Symptoms Following Exposure: Exposure can cause mild irritation of skin, eyes, nose, and respiratory tract. Chronic exposure may cause inflammation and sensitization of the skin. 3.3 Treatment of Exposure: Remove the victim from further exposure and send for medical assistance. If necessary, remove contaminated clothes and shoes. EYES: Flush immediately with large amounts of water, lifting lids occasionally. SKIN: Wash immediately with soap and water. INGESTION: Induce vomiting. INHALATION: Administer artificial respiration if required. 3.4 TLV-TWA: 25 ppm. 3.5 TLV-STEL: Not listed. 3.6 TLV-Ceiling: Not listed. 3.7 Toxicity by Ingestion: Grade 2; LD₅₀ = 2.05 g/kg(rat) 3.8 Toxicity by Inhalation: Currently not available. 3.9 Chronic Toxicity: Mutagenic in bacterial test systems, and DNA damage was induced in vitro in human white blood cells. 3.10 Vapor (Gas) Irritant Characteristics: Vapors cause moderate irritation such that personnel will find high concentrations unpleasant. The effect is temporary. 3.11 Liquid or Solid Characteristics: Causes smarting of the skin and first-degree burns on short exposure; may cause second-degree burns on long exposure. 3.12 Odor Threshold: Currently not available 3.13 IDLH Value: 250 ppm. 3.14 OSHA PEL-TWA: 50 ppm. 3.15 OSHA PEL-STEL: Not listed. 3.16 OSHA PEL-Ceiling: Not listed. 3.17 EPA AEGL: Not listed</p>	

4. FIRE HAZARDS

- 4.1 **Flash Point:** 130°F C.C.
4.2 **Flammable Limits in Air:** Currently not available
4.3 **Fire Extinguishing Agents:** Dry chemical, carbon dioxide, or alcohol foam.
4.4 **Fire Extinguishing Agents Not to Be Used:** Solid stream of water may cause frothing.
4.5 **Special Hazards of Combustion**
Products: May form explosive peroxides upon contact with air. Toxic fumes such as carbon monoxide may be produced.
4.6 **Behavior in Fire:** May polymerize, generating heat and causing the container to burst.
4.7 **Auto Ignition Temperature:** Currently not available
4.8 **Electrical Hazards:** May cause some plastics, coatings, and rubbers (insulators) to deteriorate.
4.9 **Burning Rate:** Currently not available
4.10 **Adiabatic Flame Temperature:** Currently not available
4.11 **Stoichiometric Air to Fuel Ratio:** 45.2 (calc.)
4.12 **Flame Temperature:** Currently not available
4.13 **Combustion Molar Ratio (Reactant to Product):** 14.0 (calc.)
4.14 **Minimum Oxygen Concentration for Combustion (MOCC):** Not listed

5. CHEMICAL REACTIVITY

- 5.1 **Reactivity with Water:** No reaction.
5.2 **Reactivity with Common Materials:** Contact with strong oxidizers may cause fires and explosions. Contact with strong caustics may cause polymerization with the release of heat, which may cause the container to burst.
5.3 **Stability During Transport:** Stable.
5.4 **Neutralizing Agents for Acids and Caustics:** Not pertinent.
5.5 **Polymerization:** Contact with strong caustics or heat may cause polymerization with the liberation of heat.
5.6 **Inhibitor of Polymerization:** Not listed.

6. WATER POLLUTION

- 6.1 **Aquatic Toxicity:** Currently not available
6.2 **Waterfowl Toxicity:** Currently not available
6.3 **Biological Oxygen Demand (BOD):** Currently not available
6.4 **Food Chain Concentration Potential:** Currently not available
6.5 **GESAMP Hazard Profile:** Not listed

7. SHIPPING INFORMATION

- 7.1 **Grades of Purity:** 97-99%
7.2 **Storage Temperature:** < 75°F.
7.3 **Inert Atmosphere:** Nitrogen blanket.
7.4 **Venting:** Not listed.
7.5 **IMO Pollution Category:** Currently not available
7.6 **Ship Type:** Currently not available
7.7 **Barge Hull Type:** Currently not available

8. HAZARD CLASSIFICATIONS

- 8.1 **49 CFR Category:** Not listed.
8.2 **49 CFR Class:** Not pertinent.
8.3 **49 CFR Package Group:** Not listed.
8.4 **Marine Pollutant:** No
8.5 **NFPA Hazard Classification:** Not listed
8.6 **EPA Reportable Quantity:** 100 pounds
8.7 **EPA Pollution Category:** B
8.8 **RCRA Waste Number:** U041
8.9 **EPA FWPCA List:** Not listed

9. PHYSICAL & CHEMICAL PROPERTIES

- 9.1 **Physical State at 15° C and 1 atm:** Liquid
9.2 **Molecular Weight:** 130.21
9.3 **Boiling Point at 1 atm:** 327°F = 164°C = 437°K
9.4 **Freezing Point:** Currently not available
9.5 **Critical Temperature:** Currently not available
9.6 **Critical Pressure:** Currently not available
9.7 **Specific Gravity:** 0.91
9.8 **Liquid Surface Tension:** Currently not available
9.9 **Liquid Water Interfacial Tension:** Currently not available
9.10 **Vapor (Gas) Specific Gravity:** 4.5
9.11 **Ratio of Specific Heats of Vapor (Gas):** Currently not available
9.12 **Latent Heat of Vaporization:** Currently not available
9.13 **Heat of Combustion:** Currently not available
9.14 **Heat of Decomposition:** Currently not available
9.15 **Heat of Solution:** Currently not available
9.16 **Heat of Polymerization:** Currently not available
9.17 **Heat of Fusion:** Currently not available
9.18 **Limiting Value:** Currently not available
9.19 **Reid Vapor Pressure:** Currently not available

NOTES

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9.20 SATURATED LIQUID DENSITY		9.21 LIQUID HEAT CAPACITY		9.22 LIQUID THERMAL CONDUCTIVITY		9.23 LIQUID VISCOSITY	
Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F	Temperature (degrees F)	British thermal unit inch per hour-square foot-F	Temperature (degrees F)	Centipoise
	C U R R E N T L Y N O T A V A I L A B L E		C U R R E N T L Y N O T A V A I L A B L E		C U R R E N T L Y N O T A V A I L A B L E	77	2.000

9.24 SOLUBILITY IN WATER		9.25 SATURATED VAPOR PRESSURE		9.26 SATURATED VAPOR DENSITY		9.27 IDEAL GAS HEAT CAPACITY	
Temperature (degrees F)	Pounds per 100 pounds of water	Temperature (degrees F)	Pounds per square inch	Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F
68	2.000	68	0.058	68	0.00133		C U R R E N T L Y N O T A V A I L A B L E