



MATERIAL SAFETY DATA SHEET

SUBSTANCE

(Chemical Name)

Ethylene Glycol

NO.

BG-11

PRODUCT NAME, NUMBER, SYNONYM

COMMON OR TRADE NAME

Anti-Freeze: Prestone, Zerex, Peak, Dow Guard

MANUFACTURER'S NAME AND ADDRESS

TELEPHONE NUMBER

- -

HEALTH HAZARDS

HAZARD RATING

() DANGER

(X) WARNING

() CAUTION

TYPE OF HAZARD Ingestion, Skin contact

SYMPTOMS OF EXPOSURE

EFFECTS OF EXPOSURE Mild by exposure to skin and mucous membranes, but moderate by swallowing. Estimated fatal dosage is 100 ml. Conjunctivitis; nausea and vomiting, abdominal pain, weakness, mydriasis, cyanosis, *

EMERGENCY FIRST AID

Eyes: Irrigate with water. Ingestion: Induce vomiting; call a physician. Skin: Wash with soap and water. Remove contaminated clothing and launder before reuse. Inhalation: Get to fresh air.

FIRE, EXPLOSION, AND REACTIVITY DATA

EXTINGUISHING AGENTS AND FIRE FIGHTING METHODS

Alcohol foam, CO₂, dry chemical, water fog. Spray water to cool fire-exposed containers.

FLASH POINT

FLAMMABLE OR EXPLOSIVE LIMIT

OPEN CUP 116 °C CLOSED CUP 111 °C

LOWER 3.2 % UPPER %

IGNITION TEMPERATURE °C

AUTO-IGNITION TEMPERATURE 402 °C

PRODUCTS FORMED BY FIRE OR EXCESSIVE HEAT

CONDITIONS TO AVOID

Avoid fire.

STABILITY

(X) Stable

() Unstable -- Explain Conditions

INCOMPATIBLE MATERIALS AND REACTIONS

Avoid oxidizing material.

PRODUCTS OF DECOMPOSITION

HAZARDOUS POLYMERIZATION

(X) Will not occur

() May occur -- Explain Reaction and Products

PROTECTION EQUIPMENT

PERSONAL PROTECTION

Rubber gloves, chemical goggles, clothing as required, face shield, general purpose respiratory apparatus.

VENTILATION

Adequate to control vapors or mist.

ADDITIONAL PROTECTIVE EQUIPMENT

Eye fountain near work area.

HANDLING AND STORAGE

BG-11

HANDLING AND STORAGE METHODS Preferably place in resin-coated, stainless steel or aluminum containers, however iron containers permissible though slightly corrosive. Do not store in open or unlabeled containers. Close containers tightly to avoid moisture. Protect containers against **

LEAKAGE AND SPILL CONTROL Salvage if possible. Otherwise flush with water or soak up in absorbent. Paper may be used as absorbent. Evaporate on***

WASTE DISPOSAL

Burn according to local regulations or salvage. Spray into a furnace.

MEDICAL MANAGEMENT

GENERAL INSTRUCTIONS Gastric lavage (stomach wash), if swallowed, followed by saline catharsis. Administer intravenously calcium gluconate, if indicated, followed by oxygen and artificial respiration. Closely examine equilibrium of electrolytes.

PERSONAL HYGIENE

No eating and drinking in work areas.

MEDICAL RECORDS Preclude from exposure those with diseases of liver, kidneys, lungs and central nervous system. **PERIODIC** Execute physical examinations of exposed individuals annually, including functional tests of kidney and liver.

THRESHOLD LIMIT VALUE 100 ppm (Vapor) **CEILING CONCENTRATION**

ODOR THRESHOLD OTHER

PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE Liquid, syrup-like.

COLOR Colorless to various colors (colorants added) **ODOR** Odorless, sweetish taste

CHEMICAL FORMULA $C_2H_4(OH)_2$

CHEMICAL COMPOSITION (BE SPECIFIC) Ethelene Glycol

COMPOUND	PERCENT	TLV	COMPOUND	PERCENT	TLV

BOILING POINT 197.2°C

MELTING POINT -12.6°C

VAPOR PRESSURE Very low

VAPOR DENSITY 2.14

PERCENTAGE VOLATILE N/A

EVAPORATION RATE Hygroscopic

SPECIFIC GRAVITY 1.11 - 1.14

pH CONCENTRATION

SOLUBILITY Soluble in water, ethanol and ether.

CORROSIVENESS

ADDITIONAL COMMENTS

ATTACH THE FOLLOWING:

SAFETY INFORMATION FROM PRODUCT LABEL - ATTACH LABEL OR QUOTE

PRODUCT INFORMATION DATA SHEETS

OTHER MATERIALS

* tremor and convulsions (fits), areflexia, narcosis (paralysis) and coma, albuminuria, hematuria, anuria, and lymphocytosis.

** physical damage. Separate from oxidizing materials.

*** glass or iron dish in hood. Burn the paper.

- Ethylene glycol is hygroscopic.