

Ingestion

If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not induce vomiting without advice from poison control center. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Have victim rinse mouth thoroughly with water.

Notes to physician

Keep victim warm. Keep victim under observation. Symptoms may be delayed.

5. Fire Fighting Measures

Flammable properties

NFPA Rating Fire = 2. Materials that must be moderately heated or exposed to relative high ambient temperatures before ignition can occur. Heat may cause the containers to explode. Runoff to sewer may cause fire or explosion hazard.

Extinguishing media**Suitable extinguishing media**

Water. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂).

Protection of firefighters**Protective equipment and precautions for firefighters**

In case of fire and/or explosion do not breathe fumes. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also consider initial evacuation for 800 meters (1/2 mile) in all directions. ALWAYS stay away from tanks engulfed in flame. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Cool containers with flooding quantities of water until well after fire is out. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. Move containers from fire area if you can do so without risk. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.

6. Accidental Release Measures

Methods for containment

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible.

Methods for cleaning up

Should not be released into the environment.

Large Spills: Dike far ahead of liquid spill for later disposal. Dike far ahead of spill for later disposal. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. After removal flush contaminated area thoroughly with water.

Never return spills in original containers for re-use.

7. Handling and Storage

Handling

DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Do not get this material in contact with eyes. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin.

Storage

Class IIIA Combustible Liquid.

The pressure in sealed containers can increase under the influence of heat. Keep away from heat and flame. Store in cool place. Store in a well-ventilated place. Keep container tightly closed. Keep container dry. Keep out of the reach of children. Keep away from food, drink and animal feedingstuffs.

8. Exposure Controls / Personal Protection

Exposure limits**ACGIH****Components****CAS #****TWA****STEL****Ceiling**

Components	CAS #	TWA	STEL	Ceiling
Ethyl Alcohol	64-17-5	1000 ppm	1000 ppm	Not established
Diethylene Glycol Monobutyl Ether	112-34-5	20 ppm	Not established	Not established
2-Butoxyethanol	111-76-2	20 ppm	Not established	Not established

OSHA

Components	CAS #	TWA	STEL	Ceiling
Ethyl Alcohol	64-17-5	1000 ppm	Not established	Not established
Diethylene Glycol Monobutyl Ether	112-34-5	100 ppm	Not established	Not established
2-Butoxyethanol	111-76-2	50 ppm	Not established	Not established

Personal protective equipment

Eye / face protection	Do not get in eyes. Chemical goggles are recommended.
Skin protection	Wear appropriate chemical resistant clothing. Chemical resistant gloves.
Respiratory protection	Wear positive pressure self-contained breathing apparatus (SCBA).

9. Physical & Chemical Properties

Appearance	Liquid.
Boiling point	217.4 °F (102.8 °C) estimated
Color	Pale yellow
Density	0.9916 g/cm ³ estimated
Flammability (HOC)	1.7121 kJ/g estimated
Flash back	No
Flash point	155 °F (68.3 °C)
Form	Liquid.
Freezing point	Not available
Odor	Butyl
pH	9.5 - 10.5
Physical state	Liquid.
Pressure	Not applicable
Solubility	Partially
Specific gravity	0.9917 estimated

10. Chemical Stability & Reactivity Information

Chemical stability	Risk of ignition. Instability caused by elevated temperatures.
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	None known.
Hazardous decomposition products	Irritants. Toxic gas.

11. Toxicological Information

Acute effects	Acute LD50: 18728 mg/kg estimated, Rat, Dermal Acute LC50: 171 mg/l/4h estimated, Rat, Inhalation
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Component analysis - LD50**Toxicology Data - Selected LD50s and LC50s**

2-Butoxyethanol	111-76-2	Inhalation LC50 Rat 2.21 mg/L 4 h; Inhalation LC50 Rat 450 ppm 4 h; Oral LD50 Rat 470 mg/kg; Dermal LD50 Rat 2270 mg/kg; Dermal LD50 Rabbit 220 mg/kg
Diethylene Glycol Monobutyl Ether	112-34-5	Oral LD50 Rat 3384 mg/kg; Dermal LD50 Rabbit 2700 mg/kg
Ethyl Alcohol	64-17-5	Oral LD50 Rat 7060 mg/kg; Inhalation LC50 Rat 124.7 mg/L 4 h

Carcinogenicity**IARC - Group 1 (Carcinogenic to Humans)**

Ethyl Alcohol	64-17-5	Monograph 100E [in preparation] (in alcoholic beverages); Monograph 96 [in preparation] (in alcoholic beverages)
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Reproductive effects	Hazardous by OSHA criteria. Possible reproductive hazard. Can cause adverse reproductive effects - such as birth defects, miscarriages, or infertility.
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12. Ecological Information

Ecotoxicity	LC50 33305 mg/L estimated, Fish, 96.00 Hours, EC50 28769 mg/L estimated, Daphnia, 48.00 Hours, IC50 7873 mg/L estimated, Algae, 72.00 Hours, Contains a substance which causes risk of hazardous effects to the environment.
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13. Disposal Considerations

Disposal instructions Consult authorities before disposal. Do not allow this material to drain into sewers/water supplies. This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste.

14. Transport Information

Department of Transportation (DOT) Requirements

Basic shipping requirements:

Proper shipping name Not Regulated

IMDG

Basic shipping requirements:

Proper shipping name Not Regulated

IATA

Basic shipping requirements:

Proper shipping name Not Regulated

15. Regulatory Information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

2-Butoxyethanol	111-76-2	1.0 % de minimis concentration (applies to R-(OCH ₂ CH ₂) _n -OR', where n = 1, 2, or 3, R=alkyl C7 or less, or R = phenyl or alkyl substituted phenyl, R' = H or alkyl C7 or less, or OR' consisting of carboxylic acid ester, sulfate, phosphate, nitrate, or sulfonate, Chemical Category N230)
Diethylene Glycol Monobutyl Ether	112-34-5	1.0 % de minimis concentration (applies to R-(OCH ₂ CH ₂) _n -OR', where n = 1, 2, or 3, R=alkyl C7 or less, or R = phenyl or alkyl substituted phenyl, R' = H or alkyl C7 or less, or OR' consisting of carboxylic acid ester, sulfate, phosphate, nitrate, or sulfonate, Chemical Category N230)

Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical Yes

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Section 302 extremely hazardous substance No

Section 311 hazardous chemical Yes

Hazard categories (311/312)
 Immediate Hazard - Yes
 Delayed Hazard - No
 Fire Hazard - Yes
 Pressure Hazard - No
 Reactivity Hazard - No

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of New and Existing Chemicals (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

State regulations

U.S. - Pennsylvania - RTK (Right to Know) List

2-Butoxyethanol	111-76-2	Present
Diethylene Glycol Monobutyl Ether	112-34-5	Environmental hazard
Ethyl Alcohol	64-17-5	Present

16. Other Information**Further information**

HMIS® is a registered trade and service mark of the NPCA.

HMIS® ratings

Health: 1

Flammability: 2

Physical hazard: 0

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. The information in the sheet was written based on the best knowledge and experience currently available.