

Section 1. Supplier Information



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Section 2. Hazardous Ingredients

<u>Hazardous Component(s)</u>	<u>CAS #</u>	<u>PEL TWA</u>	<u>PEL Ceiling</u>	<u>TLV TWA</u>	<u>TLV STEL</u>	<u>MFG Limits</u>	<u>WGT %</u>
2-(2-Butoxyethoxy) ethanol	112-34-5	N/E	N/E	N/E	N/E	35 ppm	> 50
Lactic acid, L(+)-	79-33-4	N/E	N/E	N/E	N/E	N/E	< 30

N/A = Not Applicable; N/E = Not Established; * = Mists; # = Skin; ' = Respirable Dust; " = Total Dust; ^ = Vapor; ** = Fumes; C = Ceiling Limit

All components of this product are listed on the Toxic Substances Control Act (TSCA) Inventory and the Canadian Domestic Substances List (DSL), or are exempt from the listing.

Section 3. Hazards Identification

Primary Routes of Entry

Inhalation: YES
Skin: YES
Ingestion: YES

Hazardous Materials Information System (HMIS) Ratings

Health: * 2
Fire: 1
Reactivity: 0

0 = Minimal
1 = Slight
2 = Moderate
3 = Serious
4 = Severe
* = Chronic Hazard

Signs of Symptoms of Exposure:

INHALATION: Vapors are irritating to the nose, throat, and respiratory tract, and may produce headache and nausea in areas of poor ventilation.

SKIN: Material is mildly irritating to the skin. Prolonged or repeated contact may cause defatting and drying of the skin, resulting in irritation and dermatitis.

EYES: Vapors are slightly uncomfortable. Splashes can be irritating, will cause painful burning or stinging of eyes and lids, watering of eyes and inflammation of conjunctiva.

INGESTION: Ingestion of large amounts causes gastric disturbances. Nausea and vomiting may result.

Chemical Listed as Potential Carcinogens:

NTP: NO

IARC: NO

OSHA: NO

Target Organs: Liver, kidneys, blood, eyes, and skin.

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Protective Gloves: Wear chemical resistant gloves.

Eye Protection: Safety glasses with side shields. Do NOT wear contact lenses. Chemical goggles and/or faceshield should be worn where splashing is possible.

Other Protection: Eye wash and safety shower should be readily available. Wear a chemical resistant apron and boots where splashing is possible.

Hygienic Practices: Protective equipment and clothing should be selected, used and maintained according to applicable standards and regulations. For further information, contact the clothing or equipment manufacturer. Do not eat, drink, or smoke while using this product. Wash hands prior to eating, drinking, smoking, or using restrooms. Cleanse skin thoroughly after contact, before breaks and meals, and at the end of the work shift.

Section 9. Physical and Chemical Properties

Boiling Point: 212 ° F (initial) Degree of water solubility:
Negligible = Less than 0.1%
Slight = 0.1% - 1%
Moderate = 1% - 10%
Appreciable = More than 10%
Complete = 100%

Specific Gravity (H₂O=1): 0.99-1.00

Vapor Pressure (mm Hg): < 1

Vapor Density (air=1) > 1

Solubility in Water: Complete.

Reactivity in Water: None.

Weight per Gallon (lb/gal): 8.2 - 8.4 lbs/gal

% Volatile by Volume: 100%

% Solid by Weight: 0 %

Appearance and Odor: Clear to slightly hazy liquid with a mild odor.

Theoretical VOC: 1.1 - 1.3 lbs/gal
(>0.1 mm Hg @ 20 ° C)

Analytical VOC : 7.2 - 7.4 lbs/gal
(EPA method 24)

pH: 2.0-3.0

Section 10. Stability and Reactivity

Stability: Stable. Hazard Polymerization: Will not occur.

Conditions to Avoid: Heat, sparks, open flame, or hot surfaces.

Incompatibility (Materials to Avoid): Oxidizing agents, strong bases and salts of strong bases at elevated temperatures, aluminum surfaces, and reducing agents.

Hazardous Decomposition Products: Unidentified organic compounds and oxides of carbon.

Section 11. Toxicological Information

Ethanol, 2-(2-butoxyethoxy) [CASRN 000112-34-5]

ACUTE TOXICITY

Oral LD50 (rat) = 5.1-5.7 g/kg Eye Irritation: Moderate [Rabbit]
Oral LD50 (mouse) = 2.4 g/kg Skin Irritation: Slight [Rabbit]
Dermal LD50 (rabbit) ~ 4 g/kg Inhalation LC50 (rat) > 18 ppm; 7 hours

Other Information: Kidney effects in male rats were observed in laboratory animals exposed to this

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material. Effects were consistent with male rat hyaline droplet nephropathy, which is of questionable significance to human health.

Mutagenicity: Animal mutagenicity studies were negative. In vitro mutagenicity studies were negative in some cases and positive in other cases. [3-3,3,1,6,4-121600], [18,7-1,3,6,4-020901], & [4,16-6,4,3,1-022001]

Lactic acid [CASRN 000079-33-4]

ACUTE TOXICITY

Oral LD50 (rat) = 3,730 mg/kg Eye irritation (rabbit): Severe
Oral LD50 (mouse) = 4,875 mg/kg Skin irritation (rabbit): Severe
Dermal LD50 (rabbit) > 2,000 mg/kg Skin irritation (guinea pig): Slight - none.

Skin: Tests on animals have shown that the effect of lactic acid on skin is species dependent. Human experience and results on guinea pigs have shown that it is an irritant and not corrosive. [15,20-11,11,0-070300]

Section 12. Ecological Information

Ethanol, 2-(2-butoxyethoxy) [CASRN 000112-34-5]

ECOTOXICITY

LC50 (Poecilia reticulata) = 1150 mg/L LC50 (Lepomis macrochirus) = 1300 mg/L LC50 (Leuciscus idus) = 1805-2304 mg/L LC50 (Menidia beryllina) = 2000 mg/L
LC50 (Carassius auratus) = 2700 mg/L LC50 (Daphnia magna) = 2850 mg/L
LC50 (Notropis atherinoides) > 500 mg/L Growth inhibition IC50 (bacteria) = 255 mg/L

MOVEMENT & PARTITIONING: Bioconcentration potential is low (BCF less than 100 or Log Pow less than 3). Log octanol/water partition coefficient (log Pow) is 0.56. Potential for mobility in soil is high (Koc between 50 and 150). Log soil organic carbon partition coefficient (log Koc) is estimated to be 1.88. Henry's Law Constant (H) is estimated to be 1.52E-9 atm.m³/mol.

DEGRADATION & PERSISTENCE: Biodegradation under aerobic static laboratory conditions is high (BOD20 or BOD28/ThOD greater than 40%). Degradation is expected in the atmospheric environment within minutes to hours. 5-Day biochemical oxygen demand (BOD5) is 0.05 p/p. 10-Day biochemical oxygen demand (BOD10) is 0.39 p/p. 20-Day biochemical oxygen demand (BOD20) is 1.08 p/p. Theoretical oxygen demand (ThOD) is calculated to be 2.17 p/p. Biodegradation rate may increase in soil and/or water with acclimation. [3-3,3,1,6,4-121600]
Lactic acid [CASRN 000079-33-4]

ECOTOXICITY

48 hr - LC50 (fish) = 320 mg/l EC50 (algae) = 3,500 mg/l (neutral)
48 hr - EC50 (daphnia) = 240 mg/l

Biodegradability: Readily biodegradable, according to appropriate OECD test.

Biochemical oxygen demand (BOD5) = 0.45 mg O₂/mg
Biochemical oxygen demand (BOD20) = 0.60 mg O₂/mg
Chemical oxygen demand (COD) = 0.90 mg O₂/mg [15,20-11,11,0-070300]

Section 13. Disposal Considerations

Waste Disposal Methods (Federal, State, Local):

In accordance with all federal, state and local requirements.

RCRA Hazardous Waste Number: N/A

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Section 14. Transport Information

Hazardous Material Description:

(Proper shipping name, hazard class, hazard ID#, packing group)

Domestic ground non-bulk: NOT REGULATED

Domestic ground bulk: NOT REGULATED

International: NOT REGULATED

Section 15. Regulatory Information

SARA 313 Information This product contains the following chemical(s) above de minimis concentrations and may be subject to reporting under section 313:

Reportable Category: Certain glycol ethers, > 50 %.

Section 16. Other Information

This MSDS contains revisions in the following sections: New product

Prepared by: Andrew J. Thomas Chemist

Revised by:

The development of this Material Safety Data Sheet (MSDS) relies upon information provided to us by each of our raw material suppliers. This MSDS will be updated as changes occur to their MSDS(s).

We believe the recommendations and technical information contained herein to be accurate. However, they are given without warranty or guarantee, expressed or implied, and we assume no responsibility for losses or damage, direct or indirect, as a result of their use.