

BRUTE!

Product number: 123002



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name BRUTE!
Product number 123002
Company information Brulin & Company, Inc.
P.O. Box 270
Indianapolis, IN 46206 US
www.Brulin.com
Emergency CHEMTREC 1-800-424-9300
General information Phone: 317-923-3211
Fax: 317-925-4596

2. Hazards Identification

Emergency overview WARNING
Harmful by inhalation, in contact with skin and if swallowed. Prolonged exposure may cause chronic effects. May cause long-term adverse effects in the aquatic environment. This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

Potential health effects

Eyes Avoid contact with eyes. This product may cause irritation to the eyes.
Skin Prolonged skin contact may cause skin irritation.
Inhalation Prolonged or excessive inhalation may cause respiratory tract irritation.
Ingestion Do not ingest. Irritating to mouth, throat, and stomach.

3. Composition / Information on Ingredients

Components	CAS #	Percent
2-Butoxyethanol	111-76-2	< 40
Ethanolamine	141-43-5	< 10
D-Limonene	5989-27-5	< 1
Non-hazardous and other components below reportable levels		< > 60

4. First Aid Measures

First aid procedures

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention immediately.
Skin contact Wash with soap and water. Remove contaminated clothing. Launder contaminated clothing before reuse.
Inhalation Move to fresh air. If breathing is difficult, give oxygen.
Ingestion If conscious, drink plenty of water. Call a physician immediately.

Notes to physician Symptoms may be delayed.

General advice In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

5. Fire Fighting Measures

Flammable properties None known.

Extinguishing media

Suitable extinguishing media Dry chemical, CO₂, water spray or regular foam.

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6. Accidental Release Measures

Personal precautions	Ensure adequate ventilation. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use personal protective equipment.
Environmental precautions	Prevent further leakage or spillage if safe to do so.
Methods for containment	Stop the flow of material, if this is without risk.
Methods for cleaning up	Never return spills in original containers for re-use. Large Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Dike far ahead of liquid spill for later disposal. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean contaminated surface thoroughly.

7. Handling and Storage

Handling	Do not breathe gas/fumes/vapor/spray. Avoid contact with skin and eyes.
Storage	Keep out of the reach of children. Keep at temperatures between 4 and 48°C.

8. Exposure Controls / Personal Protection

Engineering controls	Use general ventilation.
Personal protective equipment	
Eye / face protection	Goggles. or Safety glasses.
Skin protection	Wear impervious gloves for prolonged contact.
Respiratory protection	Not normally needed. A NIOSH- approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice.

9. Physical & Chemical Properties

Appearance	clear liquid
Color	Yellow green
Odor	mild citrus and solvent
Odor threshold	Not available.
Form	Liquid.
pH	12.8
Freezing point	-94 °F (-70 °C) estimated
Boiling point	212 °F (100 °C)
Flash point	> 200 °F (> 93.3 °C) Pensky-Martens Closed Cup
Evaporation rate	1
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Vapor density	4 (2-Butoxyethanol)
Specific gravity	0.986
Solubility (water)	100 %
VOC	36 %

10. Chemical Stability & Reactivity Information

Chemical stability	Stable at normal conditions.
Conditions to avoid	Do not freeze.

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Incompatible materials	Strong oxidizing agents. Acids.
Hazardous decomposition products	At thermal decomposition temperatures, carbon monoxide and carbon dioxide. Nitrogen oxides (NOx).
Possibility of hazardous reactions	Will not occur.

11. Toxicological Information

Acute effects	Acute LD50: 1554 mg/kg, Rat, Oral Acute LD50: 786 mg/kg, Rat, Dermal Acute LC50: 1607 mg/l/4h, Rat, Inhalation Eye irritation
Local effects	Toxic by inhalation, in contact with skin and if swallowed. Liver toxicity. Blood disorder may occur after ingestion. May cause sensitization by skin contact.
Chronic effects	Repeated absorption may cause disorder of central nervous system, liver, kidneys and blood.
Further information	Symptoms may be delayed.
Carcinogenicity	
IARC Monographs: Overall evaluation	
2-Butoxyethanol (111-76-2)	3 Not classifiable as to carcinogenicity to humans.
D-Limonene (5989-27-5)	3 Not classifiable as to carcinogenicity to humans.
US ACGIH Threshold Limit Values: A3 carcinogen	
2-Butoxyethanol (111-76-2)	A3 Confirmed animal carcinogen with unknown relevance to humans.

12. Ecological Information

Ecotoxicity	Components of this product have been identified as having potential environmental concerns.
Aquatic toxicity	May cause long-term adverse effects in the aquatic environment.

13. Disposal Considerations

Waste codes	D002: Waste Corrosive material [pH <=2 or >=12.5, or corrosive to steel]
Disposal instructions	Dispose in accordance with all applicable regulations. This material and its container must be disposed of as hazardous waste. Dispose of this material and its container at hazardous or special waste collection point.

14. Transport Information

DOT

Basic shipping requirements:

Proper shipping name	Corrosive liquids, n.o.s. (2-Butoxyethanol, Potassium hydroxide RQ=769231 LBS)
Hazard class	8
UN number	UN1760
Packing group	II

Additional information:

Special provisions	B2, IB2, T11, TP2, TP27
Packaging exceptions	154
Packaging non bulk	202
Packaging bulk	242
ERG number	154

IATA

Basic shipping requirements:

Proper shipping name	Corrosive liquid, n.o.s. (2-Butoxyethanol, Potassium hydroxide)
Hazard class	8
UN number	UN1760
Packing group	II
Additional information:	
Packaging exceptions	154

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Packaging instructions cargo only	812
Packaging non bulk	202
Packaging bulk	242
Maximum net quantity packaging	1 L
Maximum net quantity packaging cargo only	30 L
Labels required	8
ERG code	8L

IMDG

Basic shipping requirements:

Proper shipping name	CORROSIVE LIQUID, N.O.S. (2-Butoxyethanol, Potassium hydroxide)
Hazard class	8
UN number	UN1760
Packing group	II

Additional information:

Packaging exceptions	154
Hazard ID	80
Item	C9
Labels required	8
Transport Category	2



DOT



IATA



IMDG

15. Regulatory Information

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

CERCLA (Superfund) reportable quantity

2-Butoxyethanol: 1.0000

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance No

Section 311 hazardous chemical Yes

State regulations

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

US - Pennsylvania RTK - Hazardous Substances: Listed substance

2-Butoxyethanol (111-76-2)	Listed.
Ethanolamine (141-43-5)	Listed.

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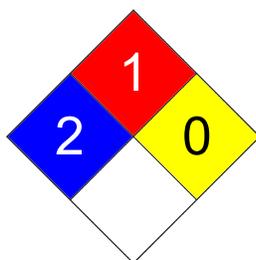
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16. Other Information

HMIS rating

Health	*	2
Flammability		1
Physical Hazard		0
Personal Protection		B

NFPA codes



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 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 given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release.

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