

MATERIAL SAFETY DATA SHEET

2-Butoxyethanol

Section 1 - Chemical Product and Company Identification

MSDS Name:	2-Butoxyethanol
Catalog Numbers:	15433-0000, 15433-0010, 15433-0025, 15433-0050, 40338-0000, 40338-0010, 40338-1000, 40339-0000, 40339-5000
Synonyms:	Butyl cellosolve; Ethylene glycol monobutyl ether
Company Identification: (INDIA)	Veritas House, 70 Mint Road, Fort, Mumbai - 400 001. INDIA
For information in the INDIA, call:	Tel: +91 - 22 - 2275 5555 / 6184 0000, Fax: +91 - 22 - 2275 5556 / 6184 0001

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name:	%	EINECS#
111-76-2	2-Butoxyethanol	>97%	203-905-0

Hazard Symbols:	XN
	
Risk Phrases:	20/21/22 36/38

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Harmful by inhalation, in contact with skin and if swallowed. Irritating to eyes and skin.

Potential Health Effects

Eye:	Causes eye irritation. Causes redness and pain.
Skin:	Causes skin irritation. Harmful if absorbed through the skin. Substance is rapidly absorbed through the skin. Causes symptoms similar to those of inhalation.
Ingestion:	Harmful if swallowed. May cause irritation of the digestive tract. May cause gastrointestinal irritation with nausea, vomiting and diarrhea.
Inhalation:	Harmful if inhaled. Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. May cause respiratory tract irritation. May cause narcotic effects in high concentration. May cause lung damage. May cause anemia.
Chronic:	May cause liver and kidney damage.

Section 4 - First Aid Measures

Eyes:	Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
Skin:	Get medical aid. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Ingestion:	Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.
Inhalation:	Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
Notes to Physician:	

Section 5 - Fire Fighting Measures

General Information:	As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Will burn if involved in a fire. Combustible liquid.
Extinguishing Media:	Use water spray, dry chemical, carbon dioxide, or chemical foam.

Section 6 - Accidental Release Measures

General Information:	Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks:	Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container.

Section 7 - Handling and Storage

Handling:	Avoid breathing dust, vapor, mist, or gas. Avoid contact with skin and eyes.
Storage:	Keep away from sources of ignition. Store in a cool, dry place. Store in a tightly closed container.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:	Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.
Exposure Limits	CAS# 111-76-2: United Kingdom , WEL - TWA: 25 ppm TWA United Kingdom, WEL - STEL: 50 ppm STEL. United States OSHA: 50 ppm TWA; 240 mg/m3 TWA Belgium - TWA: 20 ppm VLE; 98 mg/m3 VLE . Belgium - STEL: 50 ppm VLE; 246 mg/m3 VLE France - VME: 2 ppm VME; 9.8 mg/m3 VME. France - VLE: 30 ppm VLE; 147.6 mg/m3 VLE Germany: 20 ppm TWA; 98 mg/m3 TWA Germany : skin notation Malaysia : 20 ppm TWA; 96.7 mg/m3 TWA . Netherlands : 50 ppm STEL; 246 mg/m3 STEL Netherlands: 20 ppm MAC; 100 mg/m3 MAC . Spain : 20 ppm VLA-ED; 98 mg/m3 VLA-ED Spain: 50 ppm VLA-EC; 245 mg/m3 VLA-EC
Personal Protective Equipment	
Eyes:	Wear chemical splash goggles.
Skin:	Wear appropriate protective gloves to prevent skin exposure.
Clothing:	Wear appropriate protective clothing to prevent skin exposure.
Respirators:	Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits

are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State:	Clear liquid
Color:	APHA: 10 max - colorless to light yellow
Odor:	mild odor
pH:	Not available
Vapor Pressure:	0.8hPa @20 deg C
Viscosity:	5.31 mPas @20 deg C
Boiling Point:	171 deg C @760mmHg (339.80°F)
Freezing/Melting Point:	-70 deg C (-94.00°F)
Autoignition Temperature:	230 deg C (446.00 deg F)
Flash Point:	62 deg C (143.60 deg F)
Explosion Limits: Lower:	1.1 Vol %
Explosion Limits: Upper:	10.6 Vol %
Decomposition Temperature:	Not available
Solubility in water:	Soluble
Specific Gravity/Density:	0.901
Molecular Formula:	C6H14O2
Molecular Weight:	118.18

Section 10 - Stability Information

Chemical Stability:	Stable under normal temperatures and pressures.
Conditions to Avoid:	Incompatible materials.
Incompatibilities with Other Materials	Oxidizing agents, bases, aluminum.
Hazardous Decomposition Products	Carbon monoxide, carbon dioxide.
Hazardous Polymerization	Will not occur.

Section 11 - Toxicological Information

RTECS#:	CAS# 111-76-2: KJ8575000
LD50/LC50:	<p>RTECS:</p> <p>CAS# 111-76-2: Dermal, guinea pig: LD50 = 230 uL/kg; Draize test, rabbit, eye: 100 mg Severe; Draize test, rabbit, eye: 100 mg/24H Moderate; Inhalation, mouse: LC50 = 700 ppm/7H; Inhalation, mouse: LC50 = 3380 mg/m3/7H; Inhalation, rat: LC50 = 450 ppm/4H; Inhalation, rat: LC50 = 2900 mg/m3/7H; Oral, mouse: LD50 = 1230 mg/kg; Oral, mouse: LD50 = 1167 mg/kg; Oral, rabbit: LD50 = 300 mg/kg; Oral, rabbit: LD50 = 320 mg/kg; Oral, rat: LD50 = 470 mg/kg; Oral, rat: LD50 = 917 mg/kg; Skin, rabbit: LD50 = 220 mg/kg; Other:</p>
Carcinogenicity:	2-Butoxyethanol - ACGIH: A3 - Confirmed animal carcinogen with unknown relevance to humans IARC: Group 3 (not classifiable)
Other:	See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Other: Biodegradable.

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

	IATA	IMO	RID/ADR
Shipping Name:	Not regulated.	Not regulated.	Not regulated.
Hazard Class:			
UN Number:			
Packing Group:			

USA: Combustible liquid in bulk.

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XN

Risk Phrases:

- R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
- R 36/38 Irritating to eyes and skin.

Safety Phrases:

- S 36/37 Wear suitable protective clothing and gloves.
- S 46 If swallowed, seek medical advice immediately and show this container or label.

WGK (Water Danger/Protection)

- CAS# 111-76-2: 1

Canada

- CAS# 111-76-2 is listed on Canada's DSL List

US Federal

- TSCA
- CAS# 111-76-2 is listed on the TSCA Inventory.

Section 16 - Other Information

MSDS Creation Date: July 23, 2015

Revision #0 Date

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.