

# MATERIAL SAFETY DATA SHEET

## Bis(2-hydroxyethyl)ether

### Section 1 - Chemical Product and Company Identification

<b>MSDS Name:</b>	Bis(2-hydroxyethyl)ether, 99%
<b>Synonyms:</b>	Di(ethylene glycol); Bis(2-hydroxyethyl)ether; 2,2'-Oxydiethanol
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#
111-46-6	Bis(2-hydroxyethyl)ether	99%	203-872-2

<b>Hazard Symbols:</b>	XN
	
<b>Risk Phrases:</b>	22

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Harmful if swallowed. Hygroscopic (absorbs moisture from the air).

#### Potential Health Effects

<b>Eye:</b>	Causes mild eye irritation. Causes redness and pain.
<b>Skin:</b>	Causes mild skin irritation.
<b>Ingestion:</b>	Harmful if swallowed. May cause headache. May cause nausea and vomiting.
<b>Inhalation:</b>	May cause respiratory tract irritation. Prolonged exposure may result in dizziness and general weakness.
<b>Chronic:</b>	May cause liver and kidney damage. Prolonged or repeated exposure may cause nausea, dizziness, and headache.

### Section 4 - First Aid Measures

<b>Eyes:</b>	Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
<b>Skin:</b>	Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
<b>Ingestion:</b>	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. Get medical aid. Wash mouth out with water.
<b>Inhalation:</b>	Remove from exposure and move to fresh air immediately. Get medical aid.

**Notes to Physician:**

## Section 5 - Fire Fighting Measures

<b>General Information:</b>	As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.
<b>Extinguishing Media:</b>	Use foam, dry chemical, or carbon dioxide. Water spray may cause frothing.

## Section 6 - Accidental Release Measures

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

## Section 7 - Handling and Storage

<b>Handling:</b>	Avoid breathing dust, vapor, mist, or gas. Avoid contact with skin and eyes. Take precautionary measures against static discharges.
<b>Storage:</b>	Store in a cool, dry place. Store in a tightly closed container.

## Section 8 - Exposure Controls, Personal Protection

<b>Engineering Controls:</b>	
	Use adequate ventilation to keep airborne concentrations low.
<b>Exposure Limits</b>	
	CAS# 111-46-6:
	United Kingdom, WEL - TWA: 23 ppm TWA; 101 mg/m <sup>3</sup> TWA United Kingdom, WEL - STEL: 69 ppm STEL; 303 mg/m <sup>3</sup> STEL
	Germany: 10 ppm TWA; 44 mg/m <sup>3</sup> TWA
<b>Personal Protective Equipment</b>	
<b>Eyes:</b>	Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
<b>Skin:</b>	Wear appropriate protective gloves to prevent skin exposure.
<b>Clothing:</b>	Wear appropriate protective clothing to prevent skin exposure.
<b>Respirators:</b>	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

<b>Physical State:</b>	Viscous liquid
<b>Color:</b>	APHA: 5 max
<b>Odor:</b>	practically odorless
<b>pH:</b>	Not available
<b>Vapor Pressure:</b>	0.03 hPa @ 20 deg C
<b>Viscosity:</b>	38 mPas 20 deg C

<b>Boiling Point:</b>	245 deg C @ 760.00mm Hg ( 473.00°F)
<b>Freezing/Melting Point:</b>	-10 deg C ( 14.00°F)
<b>Autoignition Temperature:</b>	225 deg C ( 437.00 deg F)
<b>Flash Point:</b>	143 deg C ( 289.40 deg F)
<b>Explosion Limits: Lower:</b>	0.12 vol %
<b>Explosion Limits: Upper:</b>	0.02 vol %
<b>Decomposition Temperature:</b>	Not available
<b>Solubility in water:</b>	Soluble
<b>Specific Gravity/Density:</b>	1.1180 g/cm3
<b>Molecular Formula:</b>	C4H10O3
<b>Molecular Weight:</b>	106.12

### Section 10 - Stability and Reactivity

<b>Chemical Stability:</b>	Stable under normal temperatures and pressures.
<b>Conditions to Avoid:</b>	Incompatible materials, excess heat, exposure to moist air or water.
<b>Incompatibilities with Other Materials</b>	Strong oxidizing agents, strong acids, sodium hydroxide.
<b>Hazardous Decomposition Products</b>	Carbon monoxide, carbon dioxide.
<b>Hazardous Polymerization</b>	Will not occur.

### Section 11 - Toxicological Information

<b>RTECS#:</b>	CAS# 111-46-6: ID5950000
<b>LD50/LC50:</b>	RTECS: <b>CAS# 111-46-6:</b> Draize test, rabbit, eye: 50 mg Mild; Draize test, rabbit, skin: 500 mg Mild; Oral, mouse: LD50 = 23700 mg/kg; Oral, mouse: LD50 = 2300 mg/kg; Oral, rabbit: LD50 = 4400 mg/kg; Oral, rat: LD50 = 12565 mg/kg; Oral, rat: LD50 = 12000 mg/kg; Skin, rabbit: LD50 = 11890 mg/kg; Other:
<b>Carcinogenicity:</b>	Bis(2-hydroxyethyl)ether-Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
<b>Other:</b>	See actual entry in RTECS for complete information.

### Section 12 - Ecological Information

<b>Other:</b>	Biodegradable.
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### Section 13 - Disposal Considerations

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

### Section 14 - Transport Information

	<b>IATA</b>	<b>IMO</b>	<b>RID/ADR</b>
<b>Shipping Name:</b>	Not available	Not available	Not available
<b>Hazard Class:</b>			
<b>UN Number:</b>			
<b>Packing Group:</b>			

## Section 15 - Regulatory Information

### European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XN

#### Risk Phrases:

- R 22 Harmful if swallowed.

#### Safety Phrases:

- S 46 If swallowed, seek medical advice immediately and show this container or label.

### WGK (Water Danger/Protection)

- CAS# 111-46-6: 1

### Canada

- CAS# 111-46-6 is listed on Canada's DSL List

### US Federal

- TSCA
- CAS# 111-46-6 is listed on the TSCA Inventory.

## Section 16 - Other Information

<b>MSDS Creation Date:</b>	July 24, 2015
<b>Revision #0 Date</b>	

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