

MATERIAL SAFETY DATA SHEET

2-Methyl-1-propanol, 99%

Section 1 - Chemical Product and Company Identification

MSDS Name:	2-Methyl-1-propanol, 99%
Synonyms:	Isobutyl alcohol; Isobutanol

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#
78-83-1	2-Methyl-1-propanol	99%	201-148-0

Hazard Symbols:	XI
	
Risk Phrases:	10 37/38 41 67

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Flammable. Irritating to respiratory system and skin. Risk of serious damage to eyes. Vapours may cause drowsiness and dizziness.

Potential Health Effects

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. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Ingestion:	Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. 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. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire.
Extinguishing Media:	In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant foam. Use water spray to cool fire-exposed containers.

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. Remove all sources of ignition.

Section 7 - Handling and Storage

Handling:	Use spark-proof tools and explosion proof equipment. Do not breathe dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing. Use only in a chemical fume hood.
Storage:	Keep away from sources of ignition. Store in a cool, dry place. Store in a tightly closed container. Flammables-area.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:	
	Use adequate ventilation to keep airborne concentrations low.
Exposure Limits	
	CAS# 78-83-1:
	United Kingdom, WEL - TWA: 50 ppm TWA; 154 mg/m ³ TWA United Kingdom, WEL - STEL: 75 ppm STEL; 231 mg/m ³ STEL
	United States OSHA: 100 ppm TWA; 300 mg/m ³ TWA
	Belgium - TWA: 50 ppm VLE; 154 mg/m ³ VLE
	France - VME: 50 ppm VME; 150 mg/m ³ VME
	Germany: 100 ppm TWA; 310 mg/m ³ TWA
	Japan: 50 ppm OEL; 150 mg/m ³ OEL
	Malaysia: 50 ppm TWA; 152 mg/m ³ TWA
	Netherlands: 50 ppm MAC; 150 mg/m ³ MAC
	Spain: 50 ppm VLA-ED; 154 mg/m ³ VLA-ED

Personal Protective Equipment	
Eyes:	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.
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
Odor:	Not available
pH:	Not available
Vapor Pressure:	11.7 mbar @ 20 deg C
Viscosity:	Not available

Boiling Point:	108 deg C @ 760.00mm Hg (226.40°F)
Freezing/Melting Point:	-108 deg C (-162.40°F)
Autoignition Temperature:	430 deg C (806.00 deg F)
Flash Point:	28 deg C (82.40 deg F)
Explosion Limits: Lower:	1.60 vol %
Explosion Limits: Upper:	10.90 vol %
Decomposition Temperature:	Not available
Solubility in water:	95 g/l (20°C)
Specific Gravity/Density:	0.8030g/cm3
Molecular Formula:	C4H10O
Molecular Weight:	74.12

Section 10 - Stability and Reactivity

Chemical Stability:	Stable under normal temperatures and pressures.
Conditions to Avoid:	Incompatible materials, ignition sources.
Incompatibilities with Other Materials	Strong oxidizing agents, acid chlorides, acid anhydrides.
Hazardous Decomposition Products	Carbon monoxide, carbon dioxide.
Hazardous Polymerization	Will not occur.

Section 11 - Toxicological Information

RTECS#:	CAS# 78-83-1: NP9625000
LD50/LC50:	RTECS: CAS# 78-83-1: Inhalation, mouse: LC50 = 15500 mg/m3/2H; Inhalation, rabbit: LC50 = 2630 mg/m3/4H; Inhalation, rat: LC50 = 19200 mg/m3/4H; Oral, mouse: LD50 = 3500 mg/kg; Oral, rabbit: LD50 = 74.1 mg/kg; Oral, rat: LD50 = 2460 mg/kg; Skin, rabbit: LD50 = 3400 mg/kg; . Other: Inhalation, rat: LCL0 = 8000 ppm/4H Skin, rabbit: 20 mg/24H moderate Eye, rabbit: 2 mg open severe Eye, rabbit: 2 mg/24H severe
Carcinogenicity:	2-Methyl-1-propanol - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Other:	See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Ecotoxicity:	Not available
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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:	ISOBUTANOL	ISOBUTANOL	ISOBUTANOL

Hazard Class:	3	3	3
UN Number:	1212	1212	1212
Packing Group:	III	III	III

USA RQ: CAS# 78-83-1: 5000 lb final RQ; 2270 kg final RQ

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XI

Risk Phrases:

- R 10 Flammable.
- R 37/38 Irritating to respiratory system and skin.
- R 41 Risk of serious damage to eyes.
- R 67 Vapours may cause drowsiness and dizziness.

Safety Phrases:

- S 7/9 Keep container tightly closed and in a well-ventilated place.
- S 13 Keep away from food, drink and animal feeding stuffs.
- S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- S 37/39 Wear suitable gloves and eye/face protection.
- S 46 If swallowed, seek medical advice immediately and show this container or label.

WGK (Water Danger/Protection)

- CAS# 78-83-1: 1

Canada

- CAS# 78-83-1 is listed on Canada's DSL List

US Federal

- TSCA
- CAS# 78-83-1 is listed on the TSCA Inventory.

Section 16 - Other Information

MSDS Creation Date:	July 24, 2015
Revision #0 Date	

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