



TOKYO CHEMICAL INDUSTRY CO., LTD.

3-Methyl-1-butanol

Revision 2
number:

Revision date: 03/05/2023

Page 1 of 5

Revision date: 03/05/2023

SAFETY DATA SHEET

1. IDENTIFICATION

Product name: 3-Methyl-1-butanol
Product code: I0289
Company: TOKYO CHEMICAL INDUSTRY CO., LTD.
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Revision number: 2

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

PHYSICAL HAZARDS

Flammable liquids

Category 3

HEALTH HAZARDS

Serious eye damage/eye irritation

Category 2A

Specific target organ toxicity

Central nervous system

- Single exposure [Category 1]

Specific target organ toxicity

Respiratory tract irritation, Narcotic effects

- Single exposure [Category 3]

ENVIRONMENTAL HAZARDS

Not classified

Label elements

Pictograms or hazard symbols



Signal word

Danger

Hazard statements

Flammable liquid and vapour

Causes serious eye irritation

Causes damage to organs : Central nervous system

May cause respiratory irritation

May cause drowsiness or dizziness

Precautionary statements

[Prevention]

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Keep container tightly closed.

Ground/bond container and receiving equipment.

Use explosion-proof electrical, ventilating and lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

Do not breathe mist, vapors or spray.

Use only outdoors or in a well-ventilated area.

Do not eat, drink or smoke when using this product.

Wash hands and face thoroughly after handling.

Wear protective gloves, eye protection.

[Response]

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Call a POISON CENTER or doctor if you feel unwell.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.

If exposed or concerned: Call a POISON CENTER or doctor.

[Storage]

In case of fire: Use dry chemical, dry sand or foam to extinguish.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.

[Disposal]

Dispose of contents and container in accordance with local, regional, national regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture:	Substance
Components:	3-Methyl-1-butanol
Percent:	>99.0%(GC)
CAS RN:	123-51-3
Synonyms:	Isoamyl Alcohol , Isobutylcarbinol , Isopentanol , Isopentyl Alcohol
Chemical Formula:	C ₅ H ₁₂ O
Notice Through Official Gazettes Reference Number	
ENCS:	(2)-217
ISHL:	Official announcement chemistry substance.

4. FIRST-AID MEASURES

Inhalation:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician.
Skin contact:	Remove/Take off immediately all contaminated clothing. Gently wash with plenty of soap and water. Call a POISON CENTER or doctor/physician.
Eye contact:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Call a POISON CENTER or doctor/physician.
Ingestion:	Call a POISON CENTER or doctor/physician. Rinse mouth.
Protection of first-aiders:	A rescuer should wear personal protective equipment, such as rubber gloves and air-tight goggles.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:	Dry chemical, foam, carbon dioxide.
Unsuitable extinguishing media:	Water (It may scatter and spread fire.)
Precautions for firefighters:	Fire-extinguishing work is done from the windward and the suitable fire-extinguishing method according to the surrounding situation is used. Uninvolved persons should evacuate to a safe place. In case of fire in the surroundings: Keep containers cool by spraying with water. Eliminate all ignition sources if safe to do so.
Special protective equipment for firefighters:	When extinguishing fire, be sure to wear personal protective equipment

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:	Use extra personal protective equipment (self-contained breathing apparatus). Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Entry to non-involved personnel should be controlled around the leakage area by roping off, etc.
Environmental precautions:	Prevent product from entering drains.
Methods and materials for containment and cleaning up:	Absorb spilled material in dry sand or inert absorbent before recovering it into an airtight container. In case of large amount of spillage, contain a spill by bunding. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.
Prevention of secondary hazards:	Remove all sources of ignition. Fire-extinguishing devices should be prepared in case of a fire. Use spark-proof tools and explosion-proof equipment.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical measures: Handling is performed in a well ventilated place. Wear suitable protective equipment. Prevent generation of vapour or mist. Keep away from heat/sparks/open flame/hot surfaces. -No smoking. Take measures to prevent the build up of electrostatic charge. Use explosion-proof equipment. Wash hands and face thoroughly after handling.
Use a closed system if possible. Use a ventilation, local exhaust if vapour or aerosol will be generated.

Advice on safe handling: Avoid contact with skin, eyes and clothing.

Conditions for safe storage, including any incompatibilities

Storage conditions: Keep container tightly closed. Store in a cool, dark and well-ventilated place. Store locked up.
Store away from incompatible materials such as oxidizing agents.

Packaging material: Comply with laws.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls: Install a closed system or local exhaust. Also install safety shower and eye bath.

Control parameters: 100 ppm

Exposure limits:

ACGIH TLV(TWA): 100 ppm

ACGIH TLV(STEL): 125 ppm

OSHA PEL(TWA): 100 ppm

JSOH OELs(TWA): 100 ppm

Personal protective equipment

Respiratory protection: Half or full facepiece respirator, self-contained breathing apparatus(SCBA), supplied air respirator, etc. Use respirators approved under appropriate government standards and follow local and national regulations.

Hand protection: Impervious gloves.

Eye protection: Safety goggles. A face-shield, if the situation requires.

Skin and body protection: Impervious protective clothing. Protective boots, if the situation requires.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state (20°C): Liquid

Form: Clear

Colour: Colorless

Odour: Characteristic

Odour threshold: 0.042 ppm

Melting point/freezing point: No data available

Boiling point/range: 132°C

Flammability(solid, gas): No data available

Flash point: 46°C

Autoignition temperature: 350°C

Flammability or explosive limits:

Lower: 1.2%

Upper: 9%

pH: No data available

Kinematic viscosity: No data available

Vapour pressure: 0.4kPa/20°C

Solubility(ies):

[Water] Slightly soluble (26.7g/L, 25°C)

[Other solvents]

Miscible: Ether, Alcohols, Benzene, Chloroform, Petroleum ether, Glacial acetic acid

Very soluble: Acetone

Log Pow: 1.42

Relative density: 0.81

Vapour density: 3.0

Particle characteristics: No data available

10. STABILITY AND REACTIVITY

Reactivity:	No data available
Chemical stability:	Stable under proper conditions.
Possibility of hazardous reactions:	No special reactivity has been reported.
Conditions to avoid:	Spark, Open flame, Static discharge
Incompatible materials:	Oxidizing agents, Acid chlorides, Acid anhydrides, Reducing agents
Hazardous decomposition products:	Carbon dioxide, Carbon monoxide

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:	ihl-hmn TCLo:150 ppm ipr-rat LDLo:813 mg/kg orl-rat LD50:1300 mg/kg skn-rbt LD50:3970 uL/kg
Skin corrosion/irritation:	skn-rbt 20 mg/24H MOD
Serious eye damage/irritation:	eye-rbt 20 mg/24H MOD eye-hmn 150 ppm
Germ cell mutagenicity:	No data available
Carcinogenicity:	orl-rat TDLo:27 g/kg/75W-I scu-rat TDLo:3800 mg/kg/85w-I
IARC =	No data available
NTP =	No data available
Reproductive toxicity:	No data available
STOT-single exposure:	No data available
STOT-repeated exposure:	No data available
Aspiration hazard:	No data available
RTECS Number:	EL5425000

12. ECOLOGICAL INFORMATION

Ecotoxicity:	
Fish:	No data available
Crustacea:	No data available
Algae:	No data available
Persistence / degradability:	No data available
Bioaccumulative potential(BCF):	No data available
Mobility in soil	
Log Pow:	1.42
Soil adsorption (Koc):	No data available
Henry's Law (PaM³/mol):	1.4
Other adverse effects:	No data available

13. DISPOSAL CONSIDERATIONS

Recycle to process, if possible. Consult your local regional authorities. You may be able to burn in a chemical incinerator equipped with an afterburner and scrubber system. Observe all federal, state and local regulations when disposing of the substance.

14. TRANSPORT INFORMATION

UN-No:	1105
Proper shipping name:	Pentanol
Hazards Class:	3: Flammable liquid.
Packing group:	III
Specific precautionary transport measures and conditions:	

15. JAPANESE REGULATORY INFORMATION

Fire Defense Law:	Class-4 No.2 petroleums Dangerous grade 3 Not water-soluble fluid
ISHL(Ordinance on Prevention of Organic Solvent Poisoning):	Second-class organic solvents, etc.
ISHL(Article 57):	Dangerous or Harmful Substances Subject to Be Indicated their Names, etc.
ISHL(Article 57-2):	Dangerous or Harmful Substances Subject to Be Notified their Names, etc.
ISHL(Enforcement Order of the Industrial Safety and Health Act Appended Table 1):	Inflammable Substances
Law for safety of vessels:	Hazardous materials notification, Schedule form No.1 Flammable liquid

16. OTHER INFORMATION**The reference company name of written contents**

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