

## Chemical Safety Data Sheet MSDS / SDS

## 2-methylcyclohexanol, mixed isomers SDS

Revision Date:2024-04-25 Revision Number:1

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****Product identifier**

Product name: 2-methylcyclohexanol, mixed isomers

CAS: 583-59-5

**Relevant identified uses of the substance or mixture and uses advised against**

Relevant identified uses: For R&amp;D use only. Not for medicinal, household or other use.

Uses advised against: none

**Company Identification**

Company: Chemicalbook.in

Address: 5 vasavi Layout Basaveswara Nilayam Pragathi Nagar Hyderabad, India -500090

Telephone: +91 9550333722

**SECTION 2: Hazards identification****Classification of the substance or mixture**

Acute toxicity - Category 4, Inhalation

## GHS label elements, including precautionary statements

Pictogram(s)



Signal word

Warning

Hazard statement(s)

H332 Harmful if inhaled

Precautionary statement(s)

Prevention

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P271 Use only outdoors or in a well-ventilated area.

Response

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P317 Get medical help.

Storage

none

Disposal

none

Other hazards which do not result in classification

no data available

## SECTION 3: Composition/information on ingredients

Substance

Chemical name: 2-methylcyclohexanol, mixed isomers

Common names and synonyms: 2-methylcyclohexanol, mixed isomers

CAS number: 583-59-5  
EC number: 209-512-0  
Concentration: 100%

#### **SECTION 4: First aid measures**

##### **Description of necessary first-aid measures**

###### **If inhaled**

Fresh air, rest. Refer for medical attention.

###### **Following skin contact**

Remove contaminated clothes. Rinse and then wash skin with water and soap.

###### **Following eye contact**

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

###### **Following ingestion**

Rinse mouth. Refer for medical attention .

##### **Most important symptoms/effects, acute and delayed**

May cause headache and irritation of the eyes, nose and throat. Prolonged or repeated contact may cause a skin rash. (USCG, 1999)

##### **Indication of immediate medical attention and special treatment needed, if necessary**

no data available

#### **SECTION 5: Firefighting measures**

##### **Suitable extinguishing media**

Fire Extinguishing Agents Not to Be Used: Water. Fire Extinguishing Agents: Alcohol foam, dry chemical, or carbon dioxide. (USCG, 1999)

##### **Specific hazards arising from the chemical**

Special Hazards of Combustion Products: Irritating vapors and toxic gases, such as carbon monoxide, may be formed when involved in fire. (USCG, 1999)

#### **Special protective actions for fire-fighters**

Use AFFF, alcohol-resistant foam, dry powder, carbon dioxide. In case of fire: keep drums, etc., cool by spraying with water.

### **SECTION 6: Accidental release measures**

#### **Personal precautions, protective equipment and emergency procedures**

Personal protection: filter respirator for organic gases and vapours adapted to the airborne concentration of the substance. Remove all ignition sources. Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations.

#### **Environmental precautions**

Personal protection: filter respirator for organic gases and vapours adapted to the airborne concentration of the substance. Remove all ignition sources. Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations.

#### **Methods and materials for containment and cleaning up**

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

### **SECTION 7: Handling and storage**

#### **Precautions for safe handling**

NO open flames, NO sparks and NO smoking. Above 58°C use a closed system and ventilation. Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

#### **Conditions for safe storage, including any incompatibilities**

Fireproof.

## SECTION 8: Exposure controls/personal protection

### Control parameters

### Occupational Exposure limit values

Component	2-methylcyclohexanol, mixed isomers			
CAS No.	583-59-5			
	Limit value - Eight hours		Limit value - Short term	
	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Canada - Ontario	50	?	?	?
Denmark	50	235	100	470
Finland	50	240	75 (1)	360 (1)
Ireland	50	235	75 (1)	350 (1)
	Remarks			
Finland	(1) 15 minutes average value			
Ireland	(1) 15 minutes reference period			

### Biological limit values

no data available

### Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

### Individual protection measures, such as personal protective equipment (PPE)

#### Eye/face protection

Wear safety spectacles.

#### Skin protection

Protective gloves.

#### Respiratory protection

Use ventilation.

#### Thermal hazards

no data available

## SECTION 9: Physical and chemical properties and safety characteristics

Physical state:	Liquid.
Colour:	Colourless to yellowish brown.
Odour:	no data available
Melting point/freezing point:	-45 °C.
Boiling point or initial boiling point and boiling range:	166 °C.
Flammability:	Flammable.
Lower and upper explosion limit/flammability limit:	no data available
Flash point:	62 °C. Atm. press.:No details given.
Auto-ignition temperature:	290 °C.
Decomposition temperature:	no data available
pH:	9.
Kinematic viscosity:	kinematic viscosity (in mm <sup>2</sup> /s) = 38.3. Temperature:20°C. Remarks:Kin.-Viscosity.;dynamic viscosity (in mPa s) = 35.6. Temperature:20°C. Remarks:Calculated from Kin.-Viscosity and Density.
Solubility:	in water: poor
Partition coefficient n-octanol/water:	1.84
Vapour pressure:	1 hPa. Temperature:20 °C. Remarks:Vapour pressure.;1 hPa. Temperature:25 °C. Remarks:Vapour pressure.;7 hPa. Temperature:50 °C. Remarks:Calculated value - Antoine constants from the regression.

Density and/or relative density:	931 g/L. Temperature:20 °C.
Relative vapour density:	(air = 1): 3.9
Particle characteristics:	no data available

## SECTION 10: Stability and reactivity

### Reactivity

no data available

### Chemical stability

no data available

### Possibility of hazardous reactions

2-METHYLCYCLOHEXANOL is an alcohol. Flammable and/or toxic gases are generated by the combination of these materials with alkali metals, nitrides, and strong reducing agents. Contact with strong oxidizers may cause fires and explosions. They react with oxoacids and carboxylic acids to form esters plus water. Oxidizing agents convert them to aldehydes or ketones. They exhibit both weak acid and weak base behavior. They may initiate the polymerization of isocyanates and epoxides. Special Hazards of Combustion Products: Irritating vapors and toxic gases, such as carbon monoxide, may be formed when involved in fire (USCG, 1999).

### Conditions to avoid

no data available

### Incompatible materials

no data available

### Hazardous decomposition products

no data available

## SECTION 11: Toxicological information

### Acute toxicity

Oral: LD50 - rat (male/female) - 1 125 mg/kg bw.

Inhalation: no data available

Dermal: no data available

### Skin corrosion/irritation

no data available

### Serious eye damage/irritation

no data available

### Respiratory or skin sensitization

no data available

### Germ cell mutagenicity

no data available

### Carcinogenicity

no data available

### Reproductive toxicity

no data available

### STOT-single exposure

The substance is mildly irritating to the eyes and skin. The vapour at high levels is irritating to the eyes and upper respiratory tract.

### STOT-repeated exposure

Repeated or prolonged contact with skin may cause dermatitis.



### **Aspiration hazard**

A harmful contamination of the air will not or will only very slowly be reached on evaporation of this substance at 20°C.

## **SECTION 12: Ecological information**

### **Toxicity**

Toxicity to fish: LC0 - Danio rerio (previous name: Brachydanio rerio) -  $\geq 97.4$  mg/L - 96 h.

Toxicity to daphnia and other aquatic invertebrates: no data available

Toxicity to algae: no data available

Toxicity to microorganisms: EC50 - activated sludge - 1 860 mg/L. Remarks:Respiration rate.

### **Persistence and degradability**

no data available

### **Bioaccumulative potential**

no data available

### **Mobility in soil**

no data available

### **Other adverse effects**

no data available

## **SECTION 13: Disposal considerations**

### **Disposal methods**

#### **Product**

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

### **Contaminated packaging**

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

## **SECTION 14: Transport information**

### **UN Number**

ADR/RID: UN2617 (For reference only, please check.)

IMDG: UN2617 (For reference only, please check.)

IATA: UN2617 (For reference only, please check.)

### **UN Proper Shipping Name**

ADR/RID: METHYLCYCLOHEXANOLS, flammable (For reference only, please check.)

IMDG: METHYLCYCLOHEXANOLS, flammable (For reference only, please check.)

IATA: METHYLCYCLOHEXANOLS, flammable (For reference only, please check.)

### **Transport hazard class(es)**

ADR/RID: 3 (For reference only, please check.)

IMDG: 3 (For reference only, please check.)

IATA: 3 (For reference only, please check.)

### **Packing group, if applicable**

ADR/RID: III (For reference only, please check.)

IMDG: III (For reference only, please check.)

IATA: III (For reference only, please check.)

### **Environmental hazards**

ADR/RID: No

IMDG: No

IATA: No

### **Special precautions for user**

no data available

**Transport in bulk according to IMO instruments**

no data available

## **SECTION 15: Regulatory information**

**Safety, health and environmental regulations specific for the product in question**

**European Inventory of Existing Commercial Chemical Substances (EINECS)**

Listed.

**EC Inventory**

Listed.

**United States Toxic Substances Control Act (TSCA) Inventory**

Listed.

**China Catalog of Hazardous chemicals 2015**

Not Listed.

**New Zealand Inventory of Chemicals (NZIoC)**

Listed.

**(PICCS)**

Listed.

**Vietnam National Chemical Inventory**

Listed.

**IECSC)**

Listed.

**Korea Existing Chemicals List (KECL)**

Listed.

## SECTION 16: Other information

### Abbreviations and acronyms

CAS: Chemical Abstracts Service

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

IMDG: International Maritime Dangerous Goods

IATA: International Air Transportation Association

TWA: Time Weighted Average

STEL: Short term exposure limit

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

EC50: Effective Concentration 50%

### References

IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>

HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>

IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>

eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: [http://www.echemportal.org/echemportal/index?pageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en)

CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>

ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>

Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>

ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

### Other Information

This substance exists in two geometrical isomers (cis, trans) and can have an optical configuration. Other melting points: 7°C (cis,

dl), -4°C (trans, dl). Other boiling points: 165°C (cis, dl), 167.5°C (trans, dl).

Disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. We as supplier shall not be held liable for any