

**Safety data sheet as per COMMISSION REGULATION (EU) No 453/2010  
of 20 May 2010 amending Regulation (EC) No 1907/2006  
Product: 3,3,5-trimethylcyclohexanol**



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

**1.1 Product identifier**

**Trade name: 3,3,5-trimethylcyclohexanol**

**CAS No.:** 116-02-9

**EC No.:** 204-122-7

**Pre-Registration number** 17-2119485607-26-000

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

Manufacture of fine chemicals (SU9)

Uses identified against: no data available

**1.3 Details of the supplier of the safety data sheet:**

**Manufacturer/Supplier:**

Prasol Chemicals Ltd.,  
Prasol House, Plot No.A-17/2/3,  
T.T.C. Indl. Area, Khairne M.I.D.C.,  
Navi Mumbai - 400 710  
Maharashtra, India.  
Tel: +91-22-27782555  
Fax: +91-22-27782430

**Further information obtainable from:**

Mr. Dhaval Parikh

e-mail:sales@prasolchem.com; inquiry@prasolchem.com

**1.4 Information in case of emergency:**

Product safety department Tel: +91-22- 27782555; Fax:+91-22- 27782430

Other Comments (e.g. language(s) of the phone service): English

**SECTION 2: Hazards identification**

**2.1 Classification of the substance or mixture**

**2.1.1 Classification according to Regulation (EC) No 1272/2008**



GHS07

Skin Irrit. 2 H315 Causes skin irritation

Eye Irrit. 2 H319 Causes serious eye irritation

**2.1.2 Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



Xi; Irritant

R36/38: Irritating to eyes and skin

**Information concerning particular hazards for human and environment:** Not applicable

**2.2 Label elements**

**Labeling according to Regulation (EC) No 1272/2008**

The substance is classified and labeled according to the CLP regulation.

**Hazard pictograms**



GHS07

**Signal word** Warning

**Hazard-determining components of labeling:** Void

**Hazard statements**

H315 Causes skin irritation.

H319 Causes serious eye irritation

**Precautionary statements**

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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P321 Specific treatment (see on this label).  
P362 Take off contaminated clothing and wash before reuse.  
P332+P313 If skin irritation occurs: Get medical advice/attention.  
P337+P313 If eye irritation persists: Get medical advice/attention.

**2.3 Other hazards**

**Results of PBT and vPvB assessment:** Not applicable

**SECTION 3: Composition/information on ingredients**

**Chemical characterization:**

CAS No.	Description
116-02-9	3,3,5-trimethylcyclohexanol

**Identification number(s)**

**EC Number:** 204-122-7

**Index number:** 603-016-00-1

**Additional information:**

**Molecular Formula:** C<sub>9</sub>H<sub>18</sub>O

**Molecular Weight:** 142.24g/mol

**SECTION 4: First aid measures**

**4.1 General information:** Consult a physician. Show this safety data sheet to the doctor in attendance.

**After inhalation:**

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**After skin contact:**

Wash off with soap and plenty of water. Consult a physician.

**After eye contact:** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**After swallowing:**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

**Information for doctor:**

**4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

**4.3 Indication of any immediate medical attention and special treatment needed** No further relevant information available.

**SECTION 5: Firefighting measures**

**5.1 Suitable extinguishing agents:**

For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

**5.2 Special hazards arising from the substance or mixture** May form Carbon oxides

**5.3 Protective equipment:** Wear self-contained breathing apparatus for firefighting if necessary.

**Additional information** Use water spray to cool unopened containers

**SECTION 6: Accidental release measures**

**6.1 Person-related safety precautions:**

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

**6.2 Measures for environmental protection:**

Prevent further leakage or spillage if safe to do so.

Do not allow to enter sewers/ surface or ground water.

**6.3 Measures for cleaning/collecting:**

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

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**6.4 Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information

**SECTION 7: Handling and storage**

**7.1 Precautions for safe handling:**

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.

**Information about fire - and explosion protection:** Keep ignition sources away. No smoking. Take measures to prevent the buildup of electrostatic charge.

**7.2 Conditions for safe storage, including any incompatibilities:**

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

**Information about storage in one common storage facility:** Store away from incompatible materials.

**Further information about storage conditions:** Store away from moisture. Store in cool and dry place.

**7.3 Specific end use(s)** No further relevant information available

**SECTION 8: Exposure controls/personal protection**

**8.1 Control parameters**

**Ingredients with limit values that require monitoring at the workplace:** Not required.

**Additional information:** The lists valid during the making were used as basis.

**8.2 Exposure controls**

**Personal protective equipment:**

**General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin.

**Respiratory protection:**

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls.

If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Protection of hands:** Protective gloves

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it

**Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

**Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye protection:** Tightly sealed goggles

Tightly fitting safety goggles. Face shield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU)

**Body protection:**

Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**SECTION 9: Physical and chemical properties**

**9.1 Information on basic physical and chemical properties**

**Appearance** : Crystalline Solid

**Odour** : menthol-like

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<b>Odour threshold</b>	: no data available
<b>pH</b>	: no data available
<b>Melting point/Melting range</b>	: 26°C (at 1011.7 hPa)
<b>Boiling point/Boiling range</b>	: 197°C
<b>Flash point</b>	: 88°C (open cup)
<b>Evaporation rate</b>	: no data available
<b>Flammability</b>	: no data available
<b>Upper/lower flammability or explosive limits</b>	: no data available
<b>Vapour pressure at 20°C</b>	: 0.1 hPa
<b>Vapour density</b>	: 4.91 (Air = 1)
<b>Relative density at 40°C</b>	: 0.878
<b>Solubility in / Miscibility with water</b>	: 1450 mg/L
<b>Partition coefficient (n-octanol/water) at 23°C</b>	: 2.86 log POW
<b>Auto-ignition temperature</b>	: no data available
<b>Decomposition temperature</b>	: no data available
<b>Viscosity</b>	: no data available
<b>Explosive properties</b>	: not explosive
<b>Oxidising properties</b>	: no oxidizing properties known
<b>9.2 Other information</b>	No further relevant information available

## **SECTION 10: Stability and reactivity**

### **10.1 Reactivity**

No dangerous reactions known.

### **10.2 Chemical stability**

Under storage at normal ambient temperatures (minus 40° C to + 40° C), the product is stable.

No hazardous reaction when handled and stored according to provisions.

### **10.3 Possibility of hazardous reactions** No known hazardous reactions

### **10.4 Conditions to avoid** Heat, flames and sparks.

### **10.5 Incompatible materials:** Strong oxidizing agents

### **10.6 Hazardous decomposition products:** No dangerous decomposition products known

## **SECTION 11: Toxicological information**

### **11.1 Information on toxicological effects**

#### **Acute toxicity:**

LD50 Oral rat 3250 mg/kg

LD50 Dermal rabbit 2800 mg/kg

#### **Skin corrosion/irritation:** irritating (rabbit)

#### **Serious eye damage/irritation:** irritating (rabbit)

#### **Respiratory or skin sensitization:** non-sensitizing on skin (guinea pig)

#### **Germ cell mutagenicity:** non genotoxic

**Carcinogenicity:** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC

#### **Reproductive toxicity:** no data available

#### **STOT-single exposure:** no data available

#### **STOT-repeated exposure:** no data available

#### **Aspiration hazard:** no data available

**Additional information:** To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated

## **SECTION 12: Ecological information**

### **12.1 Toxicity**

#### **Aquatic toxicity:**

EC50 24h 96 mg/L (Daphnia magna )

EC50 72h 32.2 mg/L (algae)

### **12.2 Persistence and degradability**

#### **Biodegradation**

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The test substance was observed to be not readily biodegradable in the "Closed Bottle Test" conducted by Hüls AG (1993) according to EU method C.4 -E. 1.45% degradation was observed with in a period of 28 days. The study was assessed as "reliable without restrictions".

**12.3 Bio accumulative potential** No further relevant information available.

**12.4 Mobility in soil**

With a calculated K<sub>oc</sub> of 31.2 l/kg, the sorption potential of 3,3,5-trimethylcyclohexanol to soil or sediment organic matter is expected to be very low (Blume scale).

**12.5 Results of PBT and vPvB assessment**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

**12.6 Other adverse effects** No further relevant information available

### SECTION 13: Disposal considerations

**13.1 Waste treatment methods**

**Product:** This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

**Contaminated packaging:** Dispose of as unused product.

### SECTION 14: Transport information

**Land Transport (ADR/RID)**

**Marine Transport (IMDG)**

**Air Transport (ICAO/ IATA)**

**14.1 UN/ID Number:** -

**14.2 UN proper shipping name:** not dangerous goods in transport regulations

**14.3 Transport hazard class:** -

**14.4 Packaging group:** -

**14.5 Environmental hazards** none, not a marine pollutant

**14.6 Special precautions for the user:** no data available

**14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** not applicable

### SECTION 15: Regulatory information

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006

**Hazard pictograms** Please refer section 2

**Signal word** Warning

**Labeling according to EU guidelines:**

**Code letter and hazard designation of product:** Please refer section 2

**Risk phrases:** Please refer section 2

**15.2 Chemical safety assessment** A Chemical Safety Assessment has not been carried out and will be applicable at the time of REACH Registration.

**Substances of very high concern (SVHC) according to REACH, Article 57:** The substance is not listed as SVHC.

### SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**Department issuing MSDS:**

Product safety department.

**Contact:**

Tel: +91-22- 27782555

Fax:+91-22- 27782430

**Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

CAS: Chemical Abstracts Service (division of the American Chemical Society)

EC50: Half Maximal Effective concentration

EINECS: European Inventory of Existing Commercial Chemical Substances

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

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*IATA: International Air Transport Association*

*IBC Code: International Bulk Chemical Code*

*IMDG: International Maritime Code for Dangerous Goods*

*LC50: Lethal concentration, 50 percent*

*LD50: Lethal dose, 50 percent*

*Marpol 73/78: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978*

*RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)*

**Sources**

*REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006*

*ECHA: [http://apps.echa.europa.eu/registered/data/dossiers/DISS-9d9b3254-1470-0b9e-e044-00144f67d249/DISS-9d9b3254-1470-0b9e-e044-00144f67d249\\_DISS-9d9b3254-1470-0b9e-e044-00144f67d249.html](http://apps.echa.europa.eu/registered/data/dossiers/DISS-9d9b3254-1470-0b9e-e044-00144f67d249/DISS-9d9b3254-1470-0b9e-e044-00144f67d249_DISS-9d9b3254-1470-0b9e-e044-00144f67d249.html)*

*HSDB <http://toxnet.nlm.nih.gov/cgi-bin/sis/search/f?./temp/~jmv0m8:1:FULL>*

*chemidpluslite: <http://chem.sis.nlm.nih.gov/chemidplus/rn/116-02-9>*

*Sigma-Aldrich MSDS:*

*<http://www.sigmaaldrich.com/MSDS/MSDS/DisplayMSDSPage.do?country=IN&language=en&productNumber=S419001&brand=ALDRICH&PageToGoToURL=http%3A%2F%2Fwww.sigmaaldrich.com%2Fcatalog%2Fproduct%2Faldrich%2Fs419001%3Flang%3Den>*

*Chemspider <http://www.chemspider.com/Chemical-Structure.7997.html>*

**Data compared to the previous version altered.**

- Section 1: Chemical Product and Company Identification
- Section 3: Composition and Information on Ingredients
- Section 4: First Aid Measures
- Section 5: Fire and Explosion Data
- Section 6: Accidental Release Measures
- Section 7: Handling and Storage
- Section 8: Exposure Controls/Personal Protection
- Section 9: Physical and Chemical Properties
- Section 10: Stability and Reactivity Data
- Section 11: Toxicological Information
- Section 12: Ecological Information
- Section 13: Disposal Considerations