

**Safety data sheet as per COMMISSION REGULATION (EU) No 453/2010  
of 20 May 2010 amending Regulation (EC) No 1907/2006  
Product: Hexylene glycol**



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

**1.1 Product identifier**

**Trade name: 2-methylpentane-2,4-diol**

**CAS No.: 107-41-5**

**EC No.: 203-489-0**

**Pre-Registration number 17-2119446645-33-0000**

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

**Relevant identified uses**

- Used in textile dye vehicles
- Recommended as solvent in petroleum refining
- Used as cement additive
- As chemical intermediate.

**Sector of use:** SU 8,9 Manufacture of fine and bulk, large scale chemicals

**Environmental release category:** Manufacture (ERC1) and formulations (ERC2)

**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

**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 (CLP)**



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 (CLP)**

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**

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

**2.3 Other hazards**

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

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

**Chemical characterization:**

CAS No.	Description
107-41-5	2-methylpentane-2,4-diol

**Identification number(s)**

**EC Number:** 203-489-0

**Index number:** 603-053-00-3

**Additional information:**

**Molecular Formula:** C<sub>6</sub>H<sub>14</sub>O<sub>2</sub>

**Molecular Weight:** 118.06g/mol

**SECTION 4: First aid measures**

**4.1 General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

**After inhalation:**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

**After skin contact:** Immediately wash with water and soap and rinse thoroughly.

**After eye contact:**

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids.

Get medical aid.

**After swallowing:** If symptoms persist consult doctor.

**Information for doctor:** Treat symptomatically and supportively.

**4.2 Most important symptoms and effects, both acute and delayed** Irritant effects, cough, shortness of breath, dizziness, unconsciousness, headache, convulsions

**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:** Carbon dioxide (CO<sub>2</sub>), foam, dry powder

**5.2 Special hazards caused by the substance, its products of combustion or resulting gases:**

Combustible material, vapors are heavier than air and may spread along floors.

Forms explosive mixtures with air on intense heating.

Development of hazardous combustion gases or vapors possible in the event of fire.

**5.3 Protective equipment:** Wear self-contained breathing apparatus.

**SECTION 6: Accidental release measures**

**6.1 Person-related safety precautions:**

Wear protective clothing.

Avoid contact with the skin, eyes and clothing.

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**6.2 Measures for environmental protection:**

Do not allow product to reach sewage system or any water course.

Do not allow to penetrate the ground/soil.

**6.3 Measures for cleaning/collecting:**

Cover drains. Collect, bind, and pump off spills. Take up with liquid absorbent material. Dispose of properly. Clean up affected area.

**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. Normal measures for preventive fire protection.

**Information about fire - and explosion protection:** Keep ignition sources away. Do not smoke.

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

Store in a cool, dry, well-ventilated area.

Store away from acids and strong oxidizing agents

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

**Further information about storage conditions:** Keep container tightly sealed.

**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

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**Material of gloves**

Full contact: Glove material- Nitrile rubber Glove thickness: 0.40 mm

Splash contact: Glove material- Nitrile rubber Glove thickness: 0.11 mm

**Penetration time of glove material**

Full contact: Recommended break through time: >480 min

Splash contact: Recommended break through time: >240 min

**Eye protection:** Tightly sealed goggles; Face shield

**Body protection:** Apron, boots.

## **SECTION 9: Physical and chemical properties**

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

**Appearance** : Colorless liquid

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<b>Odor</b>	: Mild sweetish
<b>Odor threshold</b>	: 50ppm
<b>pH</b>	: 6.0-8.0 at 118.2g/L at 25°C
<b>Melting point/Melting range</b>	: -50°C
<b>Boiling point/Boiling range</b>	: 198.5°C
<b>Flash point, open cup</b>	: 93°C
<b>Evaporation rate</b>	: 0.007 (butyl acetate 1)
<b>Flammability (solid, gas)</b>	: not determined (product is liquid)
<b>Upper/lower flammability or explosive limits:</b>	
<b>Lower explosive limit:</b>	1.0% v/v
<b>Upper explosive limit:</b>	9.9% v/v
<b>Vapor pressure at 20°C</b>	: 0.05mmHg
<b>Vapor density</b>	: 4.08 (air 1)
<b>Density at 20°C</b>	: 0.922 g/cm <sup>3</sup>
<b>Solubility in / Miscibility with water</b>	: very soluble
<b>Partition coefficient (n-octanol/ water)</b>	: log Pow < - 0.14 calculated
<b>Auto-ignition temperature</b>	: 306°C
<b>Decomposition temperature</b>	: Not determined
<b>Viscosity: Dynamic at 20°C</b>	: 34 mPas
<b>Explosive properties</b>	: no data available
<b>Oxidizing properties</b>	: No oxidizing properties
<b>9.2 Other information</b>	
Critical temp = 621 K; Critical pressure = 4.01x10+6 Pa	
<b>Heat of Combustion:</b>	
Standard net heat of combustion = -3.4356x10+9 J/kmol	

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

**10.1 Reactivity:** stable under normal handling and storage conditions

**10.2 Chemical stability:** Stable under normal conditions.

**10.3 Possibility of hazardous reactions:** When handled and stored appropriately, no dangerous reactions are known.

**10.4 Conditions to avoid:** Keep away from excess heat

**10.5 Incompatible materials:** Avoid contact with strong acids. Incompatible with oxidizing materials. Avoid contact with reducing agents

**10.6 Hazardous decomposition products:** May emit toxic and irritant fumes in fire conditions

## **SECTION 11: Toxicological information**

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

**Acute toxicity:**

LD50	oral	rat	>2000mg/kg
LC50	inhalation	8h; 60ml/m <sup>3</sup> ; rat	
LD50	Dermal	rat	>2000mg/kg

**Skin corrosion/irritation:** slightly irritating rabbit, 4h

**Serious eye damage/irritation:** slightly irritating, rabbit

**Respiratory or skin sensitization:** not sensitizing

**Germ cell mutagenicity:** not 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:** NOEL 500mg/kg/day (F1)

**STOT-single exposure:** irritating to eye and skin

**STOT-repeated exposure:** NOAEL 450 mg/kg body weight/ day (local irritation in stomach)

**Aspiration hazard:** not determined

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

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**SECTION 12: Ecological information**

**12.1 Toxicity**

**Aquatic toxicity:**

LC50	96h	8690 mg/L	<i>Pimephales promelas</i>
LC50	96h	9450mg/L	<i>Oncorhynchus mykiss</i>
LC50	96h	8510mg/L	<i>Gambusia affinis</i>
LC50	96h	16500mg/L	crayfish
EC50	72h	>429mg/L	<i>Pseudokirchneriella subcapitata</i> (algae)
EC0	200mg/L		<i>Pseudomonas aeruginosa</i>
LC50	96h	11800 mg/L	tadpole

**12.2 Persistence and degradability** Biodegradability >70% Exposure time:28d Method:OECD Test Guideline 302B (Lit.) Result: easily eliminable

**12.3 Bio-accumulative potential:**

Partition coefficient: n-octanol/water log Pow:0.58

Method: (calculated) (Lit.) Bioaccumulation is not expected (log Pow < 1)

**12.4 Mobility in soil** no further data

**Additional ecological information:**

**General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

**Results of PBT and vPvB assessment** To be provided after the REACH registration

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

**SECTION 13: Disposal considerations**

**13.1 Waste treatment methods**

**Recommendation:** Observe all federal, state, and local environmental regulations.

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

**Contaminated packaging:**

**Recommendation:** Disposal must be made according to official regulations.

**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** -

**14.4 Packaging group:** -

**14.5 Environmental hazards:** none

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

**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 COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006

**Hazard pictograms** Please refer section 2

**Signal word** Warning

**Hazard statements** Please refer section 2

**Precautionary statements** Please refer section 2

**Labeling according to EU guidelines:** The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials

**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 shall be available

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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: +91-022-27782555

Fax: +91-022-27782430

**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)

EC50: half maximal effective concentration

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

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labeling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

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

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

**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-9d828ff8-98ef-6484-e044-00144f67d249/DISS-9d828ff8-98ef-6484-e044-00144f67d249\\_DISS-9d828ff8-98ef-6484-e044-00144f67d249.html](http://apps.echa.europa.eu/registered/data/dossiers/DISS-9d828ff8-98ef-6484-e044-00144f67d249/DISS-9d828ff8-98ef-6484-e044-00144f67d249_DISS-9d828ff8-98ef-6484-e044-00144f67d249.html)

Chemidplus: <http://chem.sis.nlm.nih.gov/chemidplus/rn/107-41-5>

HSDB : <http://toxnet.nlm.nih.gov/cgi-bin/sis/search2f?./temp/~z1Uv87:1>

Inchem: <http://www.inchem.org/documents/sids/sids/Hexylene.pdf>

Sigma:

<http://www.sigmaaldrich.com/MSDS/MSDS/DisplayMSDSPage.do?country=IN&language=en&productNumber=112100&brand=ALDRICH&PageToGoToURL=http%3A%2F%2Fwww.sigmaaldrich.com%2Fcatalog%2Fproduct%2Faldrich%2F112100%3Fflang%3Den>

Monument Chemicals: [http://www.monumentchemical.com/documents/HG\\_Data\\_and\\_Safety\\_Sheet.pdf](http://www.monumentchemical.com/documents/HG_Data_and_Safety_Sheet.pdf)

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

- Section 1: Identification of the substance/mixture and of the company/undertaking
- Section 2: Hazard Identification
- Section 3: Composition/information on ingredients
- Section 4: First-aid measures.
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