

Safety data sheet as per Commission Regulation (EU) 2020/878

Product: Hexylene glycol



SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Trade name	Hexylene glycol
Chemical Name	2-methylpentane-2,4-diol
CAS Number	107-41-5
EC Number	203-489-0
REACH Registration Number	01-2119539582-35-0015

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

Relevant identified uses	Industrial Use: For manufacture of chemicals Professional use: In the manufacture of pH regulators and water treatment products and laboratory chemicals; in building & construction work, health services and scientific research and development; in manufacture of textile, leather or fur. Consumer use: lubricants and greases, anti-freeze products, adhesives and sealants, polishes and waxes, air care products, washing & cleaning products, coating products, fillers, putties, plasters, modelling clay, finger paints and cosmetics and personal care products.
Uses identified against	Not for use other than those specified

1.3 Details of the supplier of the safety data sheet

Manufacturer	Prasol Chemicals Limited Prasol House, Plot No.A-17/2/3, T.T.C. Industrial Area, Khairne M.I.D.C., Navi Mumbai - 400 710. Maharashtra, India.
Telephone	+91-22-69450600/ 61952500
Telefax	+91-22-61952577
e-mail address	sales@prasolchem.com; inquiry@prasolchem.com

1.4 Emergency telephone number

Telephone	+91-22-7045783555/ 7045790555
Language	English

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

Skin Irritation	Category 2	H315	Causes skin irritation
Eye Irritation	Category 2	H319	Causes serious eye irritation
Reproductive Toxicity	Category 2	H361d	Suspected of damaging the unborn child (oral)

Information concerning particular hazards for human and environment: No further information

2.2 Label elements

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

Hazard pictograms



GHS07



GHS08

Signal word

Warning

Hazard statements

H315	Causes skin irritation
H319	Causes serious eye irritation
H361d	Suspected of damaging the unborn child (oral)

Precautionary statements

General	P103	Read label before use.
Prevention	P203	Obtain, read and follow all safety instructions before use.
	P264	Wash hands thoroughly after handling.
	P280	Use protective gloves, protective clothing, eye protection and face protection.
Response	P302+P352	IF ON SKIN: Wash with plenty of water.
	P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P318	If exposed or concerned, get medical advice.
	P321	Specific treatment: wash with plenty of water.
	P332+P313	If skin irritation persists: Get medical attention
	P337+P313	If eye irritation persists: Get medical attention
	P362+P364	Take off contaminated clothing and wash it before reuse.

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Storage	P403 P405	Store in a well-ventilated area. Store locked up.
Disposal	P501	Dispose of contents and container in accordance with national regulations

2.3 Other hazards

Not a PBT, vPVB substance according to the criteria of Annex XIII to REACH regulation

Not having endocrine disruptive properties as per criteria of Delegated Regulations (EC) 2017/2100 or (EC) 2018/605

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Name	2-methylpentane-2,4-diol/ Hexylene glycol
CAS Number	107-41-5
EC Number	203-489-0
Molecular Formula	C ₆ H ₁₄ O ₂
Molecular Weight	118.06

Name	Classification	Concentration (%)	SCL, M-factor, ATE
2-methylpentane-2,4-diol	Skin Irrit. 2, Eye Irrit. 2, Repro. Tox. 2; H315, H319, H361d (oral)	100	Not assigned

3.2 Mixtures not applicable

None of the ingredients present are classified as skin sensitisers 1A, respiratory sensitisers 1A, aspiration hazards and endocrine disruptors.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General notes

Take off all contaminated clothing immediately.

After inhalation

If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If unconscious, evaluate the need for artificial respiration. Get immediate medical attention

After skin contact

Wash off with plenty of water immediately, seek medical advice if necessary.

After eye contact

Rinse with plenty of water immediately and seek medical advice.

After swallowing

Do not induce vomiting and seek medical advice immediately.

Self-protection of the first aider

No special protection is needed

4.2 Most important symptoms and effects, both acute and delayed

Not expected to present a significant hazard under anticipated conditions of normal use

After inhalation

EXPOSURE TO HIGH CONCENTRATIONS: Central nervous system depression. Headache. Dizziness. Coordination disorders. Narcosis. Impaired concentration. Respiratory difficulties.

After skin contact

Red skin. Tingling/irritation of the skin.

After eye contact

Irritation of the eye tissue. Inflammation/damage of the eye tissue.

After swallowing

AFTER INGESTION OF HIGH QUANTITIES: Vomiting. Nausea. Disturbances of consciousness

Chronic symptoms

Skin rash/inflammation

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically and supportively

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

CO₂, dry powder, foam or water spray

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Combustible liquid. May form toxic carbon oxides if burning. Closed container may rupture if strongly heated. Vapours can travel to a source of ignition and flash back. Explosive mixtures may occur at temperatures at or above the flashpoint.

5.3 Advice for firefighters

Cool closed containers exposed to fire with water spray.
Wear self-contained breathing apparatus.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

For small spills and large spills: Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Clear spills immediately

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For non-emergency personnel	Protective equipment: Gloves, Face shield, Protective clothing. Emergency procedures: Mark the danger area. No naked flames. Wash contaminated clothes.
For emergency responders	Protective equipment: Equip cleanup crew with proper protection. Emergency procedures: Ventilate area.
6.2 Environmental precautions	Do not allow to enter sewers, surface or ground water.
6.3 Methods and material for containment and cleaning up	For containment: Contain released product, collect/pump into suitable containers. Plug the leak, cut off the supply For cleaning up: Soak up with inert absorbent material eg. sand, earth, vermiculite or powdered lime stone and keep in suitable, closed containers for disposal. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.
6.4 Reference to other sections	Section 8 for information on Exposure controls and personal protection Section 13 for disposal information

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling	
Protective measures	Measures to prevent fire: Keep away from naked flames/heat. Use spark-/explosion proof appliances. Measures to prevent aerosol and dust generation: Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Measures to protect the environment: Keep container tightly closed. If possible, use material transfer, metering and blending plants that are closed.
Advice on general occupational hygiene	Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
7.2 Conditions for safe storage, including any incompatibilities	
Technical measures and storage conditions	Keep only in the original container in a cool, well ventilated place away from ignition sources and incompatible materials. Keep container closed when not in use Follow normal measures for preventive fire protection.
Packaging material	SUITABLE MATERIAL: steel, stainless steel, carbon steel, aluminium, copper, bronze, glass
Incompatible products	Strong bases. Strong acids, reducers, acid anhydrides
Storage conditions	Store at normal ambient temperature (-40°C to +45°C, depending on geographical location). Ventilation at floor level. Store at ambient temperature. Keep container tightly closed in a dry and well-ventilated place. Residual vapours might explode on ignition; do not apply heat, cut, drill and grind or weld on or near the container.
Advice on common storage	Observe prohibition against storing together!
Storage stability	Stable under recommended storage conditions
Storage class	10 Combustible liquid
7.3 Specific end use(s)	No additional information available

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters	
Occupational Exposure Limit	25ppm TLV
DNEL/DMEL (Workers)	
Acute - local effects, inhalation	98 mg/m ³
Long-term - systemic effects, dermal	42 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	44.4 mg/m ³
Long-term - local effects, inhalation	49 mg/m ³
DNEL/DMEL (General population)	
Acute - local effects, inhalation	49 mg/m ³
Long-term - systemic effects, oral	1.5 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	7.8 mg/m ³
Long-term - systemic effects, dermal	15 mg/kg bodyweight/day
Long-term - local effects, inhalation	25 mg/m ³
PNEC (Water)	
PNEC aqua (freshwater)	0.429 mg/l

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PNEC aqua (marine water)	0.0429 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	1.59 mg/kg dwt
PNEC sediment (marine water)	0.159 mg/kg dwt
PNEC (Soil)	
PNEC soil	0.066 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	20 mg/l

8.2 Exposure controls

Appropriate engineering controls If possible, use closed lines for material transfer, metering and blending.

Personal protective equipment

For eye/ face protection closed goggles, face shield

For Skin protection

Hand protection	Type of material	Thickness	Breakthrough time
	Butyl-rubber	0.5 mm	> 480 min
Body protection	Polychloroprene (PCP)	0.5 mm	110 min
	Boots, body suit		

For Respiratory protection Respiratory equipment with suitable filter or a self-contained respiratory apparatus.

For Thermal hazards No additional information

For Environmental exposure If possible use closed metering and blending plants. Do not inhale vapours / aerosols. Avoid contact with skin and eyes. Remove immediately all contaminated clothing. Use disposable clothing if appropriate. Do not eat, drink or smoke during use.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state	Liquid
Colour	Colourless
Odour	Sweetish
Odour threshold	50ppm
Melting point	-50°C
Boiling point	198.5°C
Flammability	May be combustible at high temperatures
Lower and upper explosion limit	1.0-9.9% v/v
Flash point	93°C (Closed cup)
Ignition temperature	306°C
Decomposition temperature	no data available
pH	6.0-8.0 at 118.2g/L at 25°C
Kinematic viscosity at 20°C	37mm ² /s (Dynamic viscosity 34mPa.s)
Relative density	0.922 at 20°C
Solubility in water	68.78g/l at 25°C (very soluble)
Partition coefficient	log Pow (n-octanol-water) = 0.58 (calculated)
Vapour pressure	0.05mmHg (6.66Pa) at 20°C
Relative vapour density	4.08 (air =1)
Particle characteristics	Not applicable (substance is a liquid)

9.2 Other information

Explosive properties	no explosive properties based on chemical structure
Oxidizing properties	no oxidizing properties based on chemical structure
Evaporation rate	<0.01 (butyl acetate = 1)
Heat of Combustion	29875 kJ/kg at 25°C
Heat of Vaporization	435 kJ/kg

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity	No hazardous reaction when handled and stored according to provisions.
10.2 Chemical stability	Under storage at normal ambient temperatures, the product is stable.
10.3 Possibility of hazardous reactions	No known hazardous reactions if used as directed
10.4 Conditions to avoid	Avoid excessive heat and sources of ignition
10.5 Incompatible materials	Strong oxidizing agents, Strong acids, Acid anhydrides
10.6 Hazardous decomposition products	Thermal decomposition products- carbon oxides

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SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

LD50	oral	rat	>2000mg/kg bw	not classified
LC50	inhalation	rat	>50-60ppm (saturated vapour concentration)	not classified
LD50	Dermal	rabbit	>2000ml/kg bw	not classified

Skin irritation

slightly irritating **Category 2 H315**

Serious eye irritation

slightly irritating **Category 2 H319**

Respiratory or skin sensitization

No sensitizing effects known

Germ cell mutagenicity

non mutagenic (Ames test)

Carcinogenicity

non-carcinogenic

Reproductive toxicity

Fertility: No effect on fertility; NOAEL relevant to humans 800 mg/kg/day

Developmental toxicity: NOEL 250mg/kg/day; **Category 2 H361d (oral)**

STOT-single exposure

irritating to eye and skin

STOT-repeated exposure

NOAEL 450mg/Kg bw

Aspiration hazard

Not classified

11.2 Information on other hazards

Endocrine disrupting properties

No endocrine disrupting properties

Other information

No further information

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Aquatic toxicity

Toxicity to fish	LC50	96h	8690mg/L	<i>Pimephales promelas</i>
Toxicity to aquatic invertebrates	EC50	48h	5410mg/L	<i>Daphnia magna</i>
Toxicity to aquatic algae and cyanobacteria	EC50	72h	>429mg/L	<i>Pseudokirchneriella subcapitata</i>
Toxicity to microorganisms	NOEC	10d	200mg/L	<i>Pseudomonas aeruginosa</i>

12.2 Persistence and degradability

Biodegradation

readily biodegradable (81% in 28days)

12.3 Bioaccumulative potential

log Pow (n-octanol-water) 0.58; very low potential for bioaccumulation

12.4 Mobility in soil

Hexylene glycol is miscible with water, has low log Kow and vapour pressure, and is readily biodegradable. It would be expected to partition predominantly into environmental waters, not to sorb on soil or sediment particles and not to be a candidate for long distance transport.

12.5 Results of PBT and vPvB assessment

Not a PBT, vPvB substance according to the REACH regulation

12.6 Endocrine disrupting properties

No endocrine disrupting properties

12.7 Other adverse effects

Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Observe all national, state and local environmental regulations.

Product disposal

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Packaging disposal

Clean container with water. Recover waste water for processing later. Destroy packaging by incineration at an approved waste disposal site.

Sewage disposal

Do not dispose in sewage.

SECTION 14: TRANSPORT INFORMATION

14.1 UN Number

ADR/RID

Not applicable (not hazardous for transport)

IMDG

Not applicable (not hazardous for transport)

ICAO/IATA

Not applicable (not hazardous for transport)

14.3 Transport hazard class

Not applicable (not hazardous for transport)

14.4 Packaging group

Not applicable (not hazardous for transport)

14.5 Environmental hazards

not environmentally hazardous, not a marine pollutant

14.6 Special precautions for the user

Combustible substance

14.7 Maritime transport in bulk according to IMO instruments

Ship type: 3; Pollution Category: Z

SECTION 15: REGULATORY INFORMATION

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

Major accident hazard

Seveso III

no

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International Chemical Inventory Status

USA (TSCA)	Listed (Tracking No. 24364)
Canada (DSL)	listed
Australia (AICS)	listed
Japan (MITI)	Listed (MITI No. 2-240)
Korea (KECL)	Listed (KE No. 24702)
Philippines (PICCS)	listed
China	listed
New Zealand	listed
Taiwan	listed

15.2 Chemical safety assessment A Chemical Safety Assessment has been carried out.

SECTION 16: OTHER INFORMATION

Indication of changes: Sections in which changes have been made since the last version are marked with a diamond ♦ in the left hand margin.

Abbreviations and acronyms:

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
AICS	Australian Inventory of Chemical Substances
ATE	Acute Toxicity Estimate
CAS	Chemical Abstracts Service (division of the American Chemical Society)
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DMEL	Derived minimal effect level
DNEL	Derived No-Effect Level
DSL	Domestic Substances List
EC	European Community
EC50	Half maximal effective concentration
ECHA	European Chemicals Agency
EINECS	European Inventory of Existing Commercial Chemical Substances
GHS	Globally Harmonized System of Classification and Labeling of Chemicals
IATA	International Air Transport Association
IBC	International Bulk Chemical
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
KECL	Korea Existing Chemicals List
KOC	Soil adsorption coefficient
LC50	Lethal concentration, 50 percent
LD50	Lethal dose, 50 percent
M-factor	Multiplication Factor
MITI	Ministry of International Trade and Industry
NOEC	No Observed Effect Concentration
PBT	Persistent, bioaccumulative and toxic substances
PICCS	Philippine Inventory of Chemicals and Chemical Substances
PNEC	Predicted No-Effect Concentration
RID	Regulations Concerning the International Transport of Dangerous Goods by Rail
SCL	Specific concentration limit
STOT	Specific target organ toxicity
TSCA	Toxic Substances Control Act
UN	United Nations
vPVB	(very) Persistent, (very) Bioaccumulative

Key literature references and sources for data

Commission Regulation (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

ECHA <https://echa.europa.eu/registration-dossier/-/registered-dossier/14212/1>

Chemid <https://chem.nlm.nih.gov/chemidplus/rn/107-41-5>

GHS 09 <https://unece.org/transport/standards/transport/dangerous-goods/ghs-rev9-2021>

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End of safety data sheet