

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



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

1.1 Product details

Trade name: 4-methylpent-3-en-2-one/ Mesityl oxide

CAS No.: 141-79-7

EC No.: 205-502-5

Pre-Registration number 17-2119446646-31-0000

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

Relevant identified uses: used in paint removers, as a solvent for plastics, as an insect repellent.

Sector of use: SU 3 industrial uses

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

Uses identified against: Food additive, medicinal products

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 (CLP)



GHS02

Flam. Liq. 3

Acute Tox. 4

Skin Irrit. 2

Eye Irrit. 2

Acute Tox. 3

STOT Single Exp. 3 H335 May cause respiratory irritation



GHS06

H226 Flammable liquid and vapor

H302 Harmful if swallowed

H315 Causes skin irritation

H319 Causes serious eye irritation

H331 Toxic if inhaled.



GHS07

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



Xn; Harmful

R10: Flammable

R20/22: Harmful by inhalation and if swallowed

Xi; R36/37/38 Irritating to eyes, respiratory system 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.

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

Product: Mesityl oxide



Hazard pictograms



GHS02



GHS06



GHS07

Signal word Danger

Hazard-determining components of labeling: Void

Hazard statements

H226 Flammable liquid and vapor.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H315 Causes skin irritation
H319 Causes serious eye irritation
H331 Toxic if inhaled.
H335 May cause respiratory irritation

Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P311: Call a POISON CENTER/doctor/...
P403+P233: Store in a well-ventilated place. Keep container tightly closed.

2.3 Other hazards

Results of PBT and vPvB assessment: The substance is not PBT / vPvB

SECTION 3: Composition/information on ingredients

Chemical characterization:

CAS No. Description
141-79-7 4-methylpent-3-en-2-one

Identification number(s)

EC Number: 205-502-5

Index number: 606-009-00-1

Additional information:

Molecular Formula: C₆H₁₀O

Molecular Weight: 118.06g/mol

SECTION 4: First aid measures

4.1 General information:

Immediately remove any clothing soiled by the product.

After inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician. In case of unconsciousness, place patient stably in side position for transportation.

After skin contact: Remove any contaminated clothing. Wash skin with soap and water for at least 15 minutes. Get medical attention if irritation develops or persists. Wash clothing before reuse.

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 swallowed, wash out mouth with water provided person is conscious. Call a physician.

4.2 Most important symptoms and effects, both acute and delayed

The following symptoms may occur:

Cough, dizziness, dullness, headache, shortness of breath, sore throat, gastro spasm, dry skin, redness, pain.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

Information for doctor: Treat symptomatically and supportively.

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

Product: Mesityl oxide



SECTION 5: Firefighting measures

5.1 Suitable extinguishing agents:

- a) For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide.
- b) 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.

For safety reasons unsuitable extinguishing agents: Water with full jet

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

- a) Flammable liquid. Vapor may travel considerable distance to source of ignition and flash back.
 - b) Thermal decomposition giving flammable and toxic products: Peroxides
- Explosion Hazards: Container explosion can occur under fire conditions. In advanced or massive fires the area should be evacuated and the fire should be fought from a remote explosion-resistant location.

5.3 Advice for firefighters: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes

Additional information Use water spray to cool unopened containers

SECTION 6: Accidental release measures

6.1 Person-related safety precautions:

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

6.2 Environmental protection: Keep away from drains, surface and groundwater and soil.

6.3 Measures for cleaning/collecting:

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.

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:

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 ventilation, local exhaust if vapor or aerosol will be generated. Confirm in advance if peroxides exist when operations involving heating such as distillation are carried out.

Information about fire - and explosion protection:

Prevent generation of vapor or mist. Keep away from heat/sparks/open flame/hot surfaces. -No smoking.

7.2 Conditions for safe storage, including any incompatibilities: Store in a cool, dry, well-ventilated area.

Information about storage in one common storage facility:

Store away from incompatible materials such as oxidizing agents.

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

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.

Personal protective equipment:

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

Product: Mesityl oxide



PRASOL

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: Splash contact: Glove material: Butyl rubber Glove thickness: 0.7 mm

Penetration time of glove material Full contact: Recommended break through time: >120 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 to light yellow liquid
Odor	: peppermint-like
Odor threshold	: 0.45 ppm
pH	: not determined (does not liberate H ions when dissolved)
Melting point/Melting range:	-53°C
Boiling point/Boiling range:	130°C
Flash point	: 25°C
Evaporation rate	: 0.85(butyl acetate=1)
Flammability (solid, gas)	: not applicable
Upper/lower flammability or explosive limits:	
Lower:	1.4 %
Upper:	7.2 %
Vapor pressure at 20°C:	1.2 kPa
Vapor density	: 3.4 (air = 1) at boiling point of mesityl oxide
Density at 20°C	: 0.8653 g/cm ³
Solubility in / Miscibility with water at 20°C:	30 g/l; soluble
Partition coefficient (n-octanol/water) at 25°C:	1.37 (calculated)
Auto-ignition temperature	: 335°C
Decomposition temperature	: not determined
Viscosity at 20°C	: 0.717 mm ² /s
Explosive properties	: May form explosive peroxides
Oxidising properties	: none

9.2 Additional information: no further relevant data

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 May form explosive peroxides

10.4 Conditions to avoid Heat, flames and sparks.

10.5 Incompatible materials: Strong oxidizing agents reacts violently with 2-aminoethanol, chlorosulfonic acid, ethylene diamine, nitric acid, oleum, and sulfuric acid.

10.6 Hazardous decomposition products: Carbon monoxide and carbon dioxide.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity:

LD50 Oral rat 1120 mg/kg

Revision: 15-02

Issue Date: 17.05.2016

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

Product: Mesityl oxide



LD50 Dermal rabbit 5150 mg/kg
Skin corrosion/irritation: Causes skin irritation
Species: Rabbit Dosage: 430 mg Remarks: Open irritation test
Serious eye damage/irritation: May cause irritating effect.
Species: Human Dosage: 25 ppm Exposure time: 15Min
Species: Rabbit Dosage: 20 mg Remarks: Severe irritation effect
Respiratory or skin sensitization: May cause sensitization through skin contact.
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: Affected organs: respiratory tract Route of exposure: Inhalation
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	18h	156mg/L	<i>Pseudomonas putida</i>
EC50	48h	110mg/L	<i>Daphnia</i>
IC50	96h	120mg/L	<i>Pseudokirchneriella subcapitata</i>
LC50	96h	71mg/L	Fish <i>Onchorhynchus mykiss</i> (Rainbow trout))

12.2 Persistence and degradability

Biodegradability 75% 28d Readily biodegradable

Behavior in environmental systems:

12.3 Bio accumulative potential not expected to bioaccumulate

Partition coefficient: n-octanol/water log Pow: 1.37

Bioaccumulation is not expected (log Pow < 1)

12.4 Mobility in soil no data available

12.5 Results of PBT and vPvB assessment The substance is not PBT / vPvB

12.6 Other adverse effects No further relevant information available

General notes:

Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water

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

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product:

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: Disposal must be made according to official regulations.

Recommended cleansing agents: Water, if necessary together with cleansing agents

SECTION 14: Transport information

Land Transport (ADR/RID)

Marine Transport (IMDG)

Air Transport (ICAO/ IATA)

14.1 UN/ID Number: 1229

14.2 UN proper shipping name: MESITYL OXIDE

14.3 Transport hazard class: 3 Flammable liquids

14.4 Packaging group: III

14.5 Environmental hazards: none, not a marine pollutant

14.6 Special precautions for the user: flammable

Danger code (Kemler) : 30

Revision: 15-02

Issue Date: 17.05.2016

Page 5 of 7

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



Tunnel restriction code : D/E
EMS Number : F-E,S-D

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: no data available

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/

Hazard pictograms Please refer section 2

Signal word Danger

Hazard statements Please refer section 2

Precautionary statements Please refer section 2

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 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)

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://echa.europa.eu/registration-dossier/-/registered-dossier/2148/1>

Chemspider: <http://www.chemspider.com/Chemical-Structure.8526.html>

Chemidplus: <http://chem.sis.nlm.nih.gov/chemidplus/rn/141-79-7>

HSDB: <http://toxnet.nlm.nih.gov/cgi-bin/sis/search2/f?./temp/~wQEimL:1>

CDC: <http://www.cdc.gov/niosh/docs/81-123/pdfs/0385.pdf>

Inchem: <http://www.inchem.org/documents/icsc/icsc/eics0814.htm>

Sigma: <http://www.sigmaaldrich.com/MSDS/MSDS/DisplayMSDSPage.do?country=IN&language=en&productNumber=281832&brand=ALDRICH&PageToGoToURL=http%3A%2F%2Fwww.sigmaaldrich.com%2Fcatalog%2Fproduct%2Faldrich%2F281832%3Flang%3Den>

Actor: <http://actor.epa.gov/actor/GenericChemicalPdfServlet?casrn=141-79-7>

Data compared to the previous version altered.

- Section 1: Identification of the substance/mixture and of the company/undertaking
- Section 2: Hazard Identification

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

Product: Mesityl oxide



- Section 3: Composition/information on ingredients
- Section 4: First-aid measures.
- Section 5: Fire-fighting measures
- 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.
- Section 11: Toxicological Information.
- Section 12: Ecological Information.
- Section 13: Disposal consideration
- Section 14: Transport information
- Section 15: Regulatory information

PRASOL