

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



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

1.1 Product identifier

Trade name: Cumene hydroperoxide/ α,α -dimethylbenzyl hydroperoxide/ CHP

CAS No.: 80-15-9

EC No.: 201-254-7

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

Relevant identified uses: Laboratory use and manufacture and use as intermediate for organic peroxides and formulations

Sector of use: SU 8,9 manufacture

Environmental release category: Manufacture (ERC1), Formulations (ERC2) and use of intermediates (ERC6a)

Uses identified against: Relevant regulations have to be taken into account

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

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
Flame



GHS05
Corrosion



GHS06
Skull
and crossbones



GHS07
Exclamation
mark



GHS08
Health hazard



GHS09
Environment

Org. Perox. Type F

Acute Tox. Oral Cat. 4

Acute Tox. Inhalation Cat.3

Acute Tox. Dermal Cat. 4

Skin Corr. Cat. 1B

Skin Sens. Cat. 1

Eye Dam. Cat.1

Acute Tox. Inhalation Cat 2

Muta. Cat.2

STOT Rep. Exp. Cat. 2

Aquatic Chronic Cat. 2

H242

H302

H311

H312

H314

H317

H318

H330

H341

H373

H411

Heating may cause a fire.

Harmful if swallowed.

Toxic in contact with skin.

Harmful in contact with skin

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

Causes serious eye damage.

Fatal if inhaled.

Suspected of causing genetic defects

May cause damage to organs

Toxic to aquatic life with long lasting effects.

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

O; R7 May cause fire

Xn; R21/22 Harmful in contact with skin and if swallowed

T; R23 Toxic by inhalation

C; R34 Causes burns

R48/20/22 Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed

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N; R51-53 Dangerous for the environment; Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Information concerning particular hazards for human and environment: Not applicable

2.2 Label elements

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

Hazard pictograms



GHS02
Flame



GHS05
Corrosion



GHS06
Skull
and crossbones



GHS07
Exclamation
mark



GHS08
Health hazard



GHS09
Environment

Signal word **Danger**

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

Hazard statements

- H242 Heating may cause a fire.
- H302 Harmful if swallowed.
- H311 Toxic in contact with skin.
- H312 Harmful in contact with skin
- H314 Causes severe skin burns and eye damage.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H330 Fatal if inhaled.
- H341 Suspected of causing genetic defects
- H373 May cause damage to organs
- H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P234 Keep only in original container.
- P235 Keep cool
- P262 Do not get in eyes, on skin, or on clothing.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
- P305+P351+P338 IF IN EYES Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- P411 Store at temperatures not exceeding 40°C
- P420 Store away from other materials

2.3 Other hazards

Results of PBT and vPvB assessment: Not applicable

SECTION 3: Composition/information on ingredients

Hazardous ingredients according to Regulation (EC) No 1272/2008

Chemical characterization:

Identification number(s)	Description	Concentration (%)
CAS No. 80-15-9 EC Number 201-254-7 Index number 617-002-00-8	Cumene hydroperoxide/ α,α -dimethylbenzyl hydroperoxide	80-85
CAS-No. 98-82-8 EC-No. 202-704-5 Index-No. 601-024-00-X	Cumene	10-12
CAS-No. 617-94-7 EC-No. 210-539-5	2-Phenylpropan-2-ol	5-7

Additional information:

Molecular Formula: C₉H₁₂O₂ Molecular Weight: 152.19g/mol

Revision: 15-02

Issue Date: 21.07.2016

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PRASOL

SECTION 4: First aid measures

4.1 General information: Bring injured persons to the fresh air, lie comfortably and loosen tight clothing. Do not let injured persons cool-out. In the case of vomiting or danger of unconsciousness, lie and transport in stabilized side position. Call a doctor to the site of the accident.

After inhalation: Provide fresh air. Call a doctor to the site of the accident immediately.

After skin contact: Take-off drenched clothing, shoes and stocking immediately, thereby observing self-protection (e.g. gloves). Rinse affected parts of the body for a long time with plenty of water. If large areas of the skin are wetted, immediately call a doctor to the site of the accident; otherwise immediately visit a doctor in any case.

After eye contact: Rinse the eyes with opened eyelids with water for at least 15 minutes. Thereafter immediately consult an eye specialist.

After swallowing: Rinse the mouth with water and drink plenty of water. Do not induce vomiting. Call a doctor to the site of the accident immediately.

4.2 Most important symptoms and effects, both acute and delayed

The following symptoms may occur:

Vapors irritate the respiratory tract and the lungs. Lung oedema are possible. Caution, a weak-symptoms or symptom-free interval is possible. The liquid can be absorbed through the skin. Irritation of or caustic burns on the skin and mucous membranes..

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

Information for doctor: Thoroughly clean the wetted skin areas with water. After eye contact, rinse with plenty of water, in case of caustic burns send to an eye specialist or eye clinic, if possible with continuous rinsing. In case of inhalation, to prevent lung oedema, initiate inhalative cortisone therapy as soon as possible (e.g. every 10 minutes 5 strokes of a cortisone-containing dosing aerosol such as Auxilison, Thomae). Administer codeine against irritation coughing. In case of commencing or manifested pulmonal oedema administer systemic cortisone (e.g. Solu Decortin 1000 or Fortecortin 100). If swallowed, purge the stomach after intubation, administer activated charcoal, saline laxatives..

SECTION 5: Firefighting measures

5.1 Suitable extinguishing agents:

Water spray jet, dry powder extinguisher, alcohol-resistant foam, carbon dioxide (CO₂). Water is preferable on account of its cooling effect.

Extinguishing media which must not be used for safety reasons: Direct water jet (danger of spreading)

5.2 Special hazards arising from the substance or mixture: Dangerous decomposition product see section 10

5.3 Advice for firefighters: Wear self-contained respiratory protective device. Wear fully protective suit. During clearance wear protective clothing and rubber boots.

Additional information Use water spray to cool unopened containers

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. 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 Environmental precautions: Dilute with plenty of water. Do not allow to enter sewers/ surface or ground water.

6.3 Methods and material for containment and cleaning up:

Cover residues with non-combustible absorbent (absorbents, sand, dry soil, ground chalk) and send for disposal in suitable receptacles. Dispose contaminated material as waste.

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: Ensure good ventilation at the working site to remove dust. Maximum filling

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height 90 %. Do not return removed quantities into the container. Observe strict cleanliness in the room. Destroy residues.

Information about fire - and explosion protection: Keep sources of ignition away. When transferring between vessels, use grounded apparatus and equipment which does not produce sparks. Protect against heat. Emergency cooling must be available in case of nearby fire.

7.2 Conditions for safe storage, including any incompatibilities:

Shelves must be made only of aluminium. Vessels must be made of V2A steel, glass or ceramics. Attacks rubber. Do not use any auxiliary devices made of plastics. Store in a well-ventilated place. Store cool; storage temperature between -30 to +40°C. Protect the container against direct solar radiation. Keep the containers tightly closed.

Information about storage in one common storage facility: Do not store together with highly flammable and combustible substances. Follow regulations for flammable liquids..

Further information about storage conditions: Storage class: No.: 5.2 L (organic peroxides).

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: Long term DNEL inhalation = 6 mg/m³ (1 ppm). This value is considered as covering acute inhalation exposure.

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

8.2 Exposure controls

Personal protective equipment:

General protective and hygienic measures: 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:

Breathing equipment: Use respirator filter unit with gas filter

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.

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

Body protection: Complete suit protecting against chemicals. Flame retardant antistatic protective clothing. 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	: Colorless to yellow liquid
Odour	: characteristic aromatic
Odour threshold	: no data available
pH	: not applicable (does not liberate H ions when dissolved)
Melting point/Melting range	: -9°C
Initial Boiling point/Boiling range	: 53°C at 0.13 hPa
Flash point, closed cup	: 79°C
Evaporation rate	: no data available
Flammability (solid, gas)	: no data available
Upper/lower flammability or explosive limits:	
Lower:	0.9vol%
Upper:	6.5 vol%

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Vapour pressure at 20°C	: 0.0044 hPa
Vapour density	: 5.25 (air = 1) at boiling point
Relative density at 20°C	: 1.06
Solubility in / Miscibility with water	: 13.9g/L
Partition coefficient (n-octanol/water) at 25°C: -log Kow	1.6
Auto-ignition temperature	: no data
Decomposition temperature	: -70°C (self-accelerating decomposition temperature)
Viscosity at 20°C	: 12.5mPa/s
Explosive properties	: no further data
Oxidising properties	: strong oxidant

9.2 Other information

Critical temperature: 605K= 332°C; critical pressure: 3.34X10+6 Pa

SECTION 10: Stability and Reactivity

10.1 Reactivity No data available.

10.2 Chemical stability

Self-Accelerating decomposition temperature (SADT) 70°C

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions No known hazardous reactions

10.4 Conditions to avoid Do not expose to temperatures above: 40°C. Heat, flames and sparks.

10.5 Incompatible materials: Explosion hazard on contact with rust, ashes, dirt, accelerators such as heavy metal salts and tertiary amines; vigorous reaction on contact with concentrated mineral acids and alkaline solutions as well as reducing agents!

10.6 Hazardous decomposition products: Phenol, acetone

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity:

LD50	Oral	rat	1.47 g/kg
LC0	Inhalation	rat	1.37mg/ml 4h
LD50	Dermal	rabbit	0.126 ml/kg

Skin corrosion/irritation: strongly irritating (rabbit)

Serious eye damage/irritation: Severe eye irritation 24 h (rabbit)

Respiratory or skin sensitization: Insufficient data for classification

Germ cell mutagenicity: Ames test positive

Carcinogenicity: Group 2B: Possibly carcinogenic to humans (Cumene)

Reproductive toxicity: no data

STOT-single exposure: no data available

STOT-repeated exposure: oral – loss in weight, death

Aspiration hazard: no data available

Additional information: Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea (Cumene hydroperoxide)

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:

LC50	96h	3.9 mg/L	(Oncorhynchus mykiss)
EC50	48h	18.84 mg/L	(Daphnia magna)
NOEC	48h	9.15mg/L	(Daphnia magna)
TT	16h	>50 mg/L	(Pseudomonas putida)
EC50	72h	3.1 mg/L	(Scenedesmus subspicatus) algae
EC50	3h	>1000 mg/L	activated sludge

12.2 Persistence and degradability

Biodegradation not biodegradable 3% in 28d

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- 12.3 **Bio accumulative potential** not expected to bioaccumulate. BCF ~ 1
12.4 **Mobility in soil** no data available
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:

Contact a licensed professional waste disposal service to dispose of this material. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

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:** 3109

14.2 **UN proper shipping name:** ORGANIC PEROXIDE TYPE F, LIQUID

Chemical name: α,α -dimethylbenzyl hydroperoxide

14.3 **Transport hazard class:** 5.2 (P1) Organic peroxides

14.4 **Packaging group:** II

14.5 **Environmental hazards:** not a marine pollutant

14.6 **Special precautions for the user:** flammable

Danger code (Kemler) : 539

EMS Number : F-J, S-R

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 1907/2006

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)

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EC50: Half minimal effective concentration

EINECS: European Inventory of Existing Commercial Chemical Substances

EMS: Emergency Schedule

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

IATA: International Air Transport Association

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

ICAO: International Civil Aviation Organization

IMDG: International Maritime Code for Dangerous Goods

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

NOAEC: No Observed Adverse Effect Concentration

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

TT: Toxicity threshold

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-9d91d475-d504-1b6f-e044-00144f67d249/DISS-9d91d475-d504-1b6f-e044-00144f67d249_DISS-9d91d475-d504-1b6f-e044-00144f67d249.html

CDC: <http://www.cdc.gov/niosh/ipcsneng/neng0761.html>

Sigma MSDS: <http://www.sigmaaldrich.com/MSDS/MSDS/DisplayMSDSPage.do?country=IN&language=en&productNumber=247502&brand=ALDRICH&PageToGoToURL=http%3A%2Fwww.sigmaaldrich.com%2Fcatalog%2Fproduct%2Faldrich%2F247502%3Flang%3Den>

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

ChemIDplus: <http://chem.sis.nlm.nih.gov/chemidplus/rn/80-15-9>

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