

**Safety data sheet as per COMMISSION REGULATION (EU) No 453/2010
of 20 May 2010 amending Regulation (EC) No 1907/2006
Product: Di-isopropyl ether (DIPE)**



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

1.1 Product details

Trade name: Di-isopropyl ether (DIPE)

CAS No.: 108-20-3

EC No.: 203-560-6

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

Relevant identified uses: As a solvent in chemical processes, in coatings, inks, cleaners, cosmetics, Paints, lacquers and printing inks; perfumery, insecticides and food flavorings.

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. Liquid 2



GHS07

H225 Highly flammable liquid and vapor

STOT Single Exp. 3 H336 May cause drowsiness or dizziness

EUH019 May form explosive peroxides

EUH066 Repeated exposure may cause skin dryness or cracking

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



Xi; Irritant

F, R11: Highly flammable

R19: May form explosive peroxides

R66: Repeated exposure may cause skin dryness or cracking

R67: Vapors may cause drowsiness or dizziness

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



GHS02

Signal word Danger



GHS07

Revision: 15-01

Issue Date: 10.08.2015

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Hazard-determining components of labeling: Di-isopropyl ether

Hazard statements

H225 Highly flammable liquid and vapor
H336 May cause drowsiness or dizziness
EUH019 May form explosive peroxides
EUH066 Repeated exposure may cause skin dryness or cracking

Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.
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
P501 Dispose of contents/container in accordance with local/regional/national/international regulations

2.3 Other hazards

Results of PBT and vPvB assessment: Not applicable

SECTION 3: Composition/information on ingredients

Chemical characterization:

CAS No. Description
108-20-3 Di-isopropyl ether (DIPE)

Identification number(s)

EC Number: 203-560-6

Index number: 603-045-00-X

Additional information:

Molecular Formula: C₆H₁₄O
Molecular Weight: 102.18g/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: No specific antidote. Treat symptomatically and supportively.

SECTION 5: Firefighting measures

Highly flammable liquid and vapors

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

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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) Emits toxic fumes under fire conditions.

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:

TWA (ACGIH): 250ppm STEL: 310 ppm OSHA PELs: 500 ppm TWA; 2100 mg/m³ TWA

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:

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

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Material of gloves and Penetration time of glove material:
Full contact: Butyl rubber, 0.3mm, 480min breakthrough time
Splash contact: Nitrile rubber, 0.2mm, 35min breakthrough time
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 : characteristic sweet odor
Odor threshold :
pH : not determined (does not liberate H ions when dissolved)
Melting point/Melting range : -86°C
Boiling point/Boiling range : 68°C
Flash point (closed cup) : -28°C
Evaporation rate : 8.1 (butyl acetate=1)
Flammability (solid, gas) : flammable
Upper/lower flammability or explosive limits:
Lower: 1.1 %
Upper: 21.0 %
Vapor pressure at 25°C : 150mmHg
Vapor density : 3.5 (air = 1)
Density at 20°C : 0.720 g/cm³
Solubility in / Miscibility with water at 20°C: 0.65%
Partition coefficient (n-octanol/water) at 25°C: 2.4 at pH 6.7
Auto-ignition temperature : 443°C
Decomposition temperature : not determined
Viscosity at 20°C : 0.3311mPa s
Explosive properties : Forms explosive peroxides
Oxidising properties : none
9.2 Additional information: Critical Temperature: 227°C: Critical Pressure: 31.0 atm

SECTION 10: Stability and reactivity

10.1 Reactivity No dangerous reactions known.
10.2 Chemical stability May form explosive peroxides; stable under normal conditions of use
10.3 Possibility of hazardous reactions may form explosive peroxides; hazardous polymerization will not occur
10.4 Conditions to avoid Heat, flames and sparks. Containers may explode if exposed to heat
10.5 Incompatible materials: Acids, oxidizing materials, halocarbons
10.6 Hazardous decomposition products: Carbon oxides.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity:
LD50 Oral rat 5880 mg/kg
LC50 Inhalation rat 161700 mg/m³
LD50 Dermal rabbit 20lm/Kg
Skin corrosion/irritation: 363mg open skin rabbit, mild irritation
Serious eye damage/irritation: moderately irritating.
Respiratory or skin sensitization: not sensitizing
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: central nervous system Route of exposure: Inhalation

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STOT-repeated exposure: faintly narcotic

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:

LC50	96h	900mg/L	<i>Pimephales promelas</i> (fathead minnow, fish)
EC50	48h	190mg/L	<i>Daphnia Magna</i> (water flea, aquatic invertebrate)
EC50	4d	>1000mg/L	<i>Pseudokirchnerella subcapitata</i> (aquatic algae)
EC50	3h	2249mg/L	activated sludge

12.2 Persistence and degradability

Biodegradability >70% 15d ; not readily biodegradable

Photodegradation: half- life 5.3h (estimated)

Behavior in environmental systems:

12.3 Bio accumulative potential not expected to bioaccumulate , log BCF 0.77 (fish)

12.4 Mobility in soil no data available

12.5 Results of PBT and vPvB assessment Di-isopropylether is not readily biodegradable, but does not fulfill the screening criteria for persistence, bioaccumulation or toxicity, and hence is not a PBT or vPvB.

12.6 Other adverse effects No further relevant information available

General notes:

Harmful to aquatic life with long lasting effects

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: 1159

14.2 UN proper shipping name: DI-ISOPROPYL ETHER

14.3 Transport hazard class: 3 Flammable liquids

14.4 Packaging group: II

14.5 Environmental hazards: none, not a marine pollutant

14.6 Special precautions for the user: flammable

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.

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PRASOL

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)

EC50: Half minimal response 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

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-9d9a4cf8-17d0-2fad-e044-00144f67d249/DISS-9d9a4cf8-17d0-2fad-e044-00144f67d249_DISS-9d9a4cf8-17d0-2fad-e044-00144f67d249.html

HSDB: <http://toxnet.nlm.nih.gov/cgi-bin/sis/search/a?dbs+hsdb:@term+@DOCNO+624>

CDC: <http://www.cdc.gov/niosh/npg/npgd0362.html>

Inchem: <http://www.inchem.org/documents/icsc/icsc/eics0906.htm>

Sigma:

<http://www.sigmaaldrich.com/MSDS/MSDS/DisplayMSDSPage.do?country=IN&language=en&productNumber=443433&brand=SI&PageToGoToURL=http%3A%2F%2Fwww.sigmaaldrich.com%2Fcatalog%2Fproduct%2Fsi%2F443433%3Fflang%3Den>

Data compared to the previous version altered.

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