SAFETY DATA SHEET

ISOPRENE

CAS No.: 78-79-5

This Safety Data Sheet is compiled from well-established published chemical, GHS classification and regulatory reference sources for this substance. It is supplied by Suraj Chemicals as the distributor/supplier of record and is not a manufacturer-issued document. Users should also consult the specific manufacturer's SDS where available.

1. IDENTIFICATION

Product Name	Isoprene
CAS Number	78-79-5
Recommended Use	Industrial / commercial chemical trading and distribution
Supplier	Suraj Chemicals, No 92, Govindappa Naicken Street, Shiva Complex, Chennai - 600001, India
Emergency Telephone	+91 - 9840284032, 9176135357 / +91 - 44 - 25393652

2. HAZARD(S) IDENTIFICATION

GHS Signal Word Danger

HAZARD CLASSIFICATION

- Flammable liquid - Category 1
- Skin irritation - Category 2
- Germ cell mutagenicity - Category 1B
- Carcinogenicity - Category 1B

HAZARD STATEMENTS

- H224 - Extremely flammable liquid and vapour
- H315 - Causes skin irritation
- H340 - May cause genetic defects
- H350 - May cause cancer

PRECAUTIONARY STATEMENTS

- P201 - Obtain special instructions before use
- P210 - Keep away from heat, sparks, open flames and hot surfaces; no smoking
- P233 - Keep container tightly closed
- P240 - Ground/bond container and receiving equipment
- P241 - Use explosion-proof electrical/ventilating/lighting equipment
- P242 - Use only non-sparking tools
- P264 - Wash exposed skin thoroughly after handling
- P280 - Wear protective gloves/eye protection/face protection
- P302+P352 - IF ON SKIN: wash with plenty of water
- P308+P313 - IF exposed or concerned: get medical advice/attention
- P403+P235 - Store in a well-ventilated place and keep cool
- P405 - Store locked up

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Isoprene
CAS Number	78-79-5
Physical State	Liquid
Appearance / Odour	Colorless, volatile liquid with a mild, characteristic aromatic/gasoline-like odor.

4. FIRST-AID MEASURES

Eye Contact	Rinse cautiously with water for several minutes; remove contact lenses if present; seek medical attention if irritation persists.
Skin Contact	Remove contaminated clothing and wash skin with plenty of soap and water; seek medical attention if irritation persists.
Inhalation	Remove immediately to fresh air and keep at rest in a position comfortable for breathing; seek medical attention if symptoms occur.
Ingestion	Do NOT induce vomiting; rinse mouth; seek immediate medical attention.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Dry chemical, carbon dioxide, alcohol-resistant foam; water spray to cool exposed containers.
Unsuitable Extinguishing Media	Avoid a straight/high-pressure water stream, which can spread the fire.
Special Hazards	Extremely flammable, very low-flash-point, volatile liquid producing vapor that readily forms explosive mixtures with air over a wide range and may travel along the ground to an ignition source; uninhibited or heat-exposed material can undergo hazardous exothermic polymerization; combustion produces carbon monoxide and carbon dioxide.

6. ACCIDENTAL RELEASE MEASURES

Measures	Eliminate all ignition sources, ventilate the area, contain the spill with inert absorbent, avoid contact and inhalation, and collect for disposal using non-sparking, explosion-proof equipment.

7. HANDLING AND STORAGE

Handling Precautions	Use only in a closed system or with robust local exhaust ventilation and explosion-proof equipment, keep away from heat/sparks/open flame, use grounded/bonded equipment, avoid all skin contact and inhalation given its carcinogenicity classification, and ensure the product remains properly inhibited to prevent hazardous polymerization.
Storage Conditions	Store in a cool (preferably refrigerated), well-ventilated, flammables-rated area away from heat, light and oxidizers, in tightly closed, inhibited, pressure-relief-equipped containers; store locked up/restricted access given its carcinogenicity and mutagenicity classification.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits / PPE	ACGIH TLV ~5 ppm TWA is commonly referenced; requires chemical-resistant gloves (e.g., Viton, laminate film), full-face respirator with organic vapor cartridge or supplied air, chemical splash goggles, and impervious protective clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance / Odour	Colorless, volatile liquid with a mild, characteristic aromatic/gasoline-like odor.
Boiling Point	~34 C
Melting Point	~-146 C
Flash Point	~-54 C (closed cup)
Density / Specific Gravity	~0.68 g/cm3 at 20 C
Water Solubility	Practically insoluble, ~0.6 g/L at 20 C
pH Value	Not applicable (non-aqueous hydrocarbon liquid)

10. STABILITY AND REACTIVITY

Stability	Stable when properly inhibited and refrigerated/stored per specification; exposure to heat, light or loss of inhibitor can trigger hazardous exothermic polymerization.
Incompatible Materials	Strong oxidizers, polymerization initiators/catalysts, and strong acids.
Hazardous Decomposition	Carbon monoxide and carbon dioxide on combustion; uncontrolled polymerization releases significant heat.

11. TOXICOLOGICAL INFORMATION

Summary	Causes skin irritation; classified as a human carcinogen and mutagen (IARC Group 2B, with EU classification as a Category 1B carcinogen/mutagen) based on substantial animal and mechanistic evidence, relevant primarily to occupational exposure in synthetic rubber (polyisoprene) manufacture; vapor may cause mild CNS effects (headache, dizziness) at elevated concentrations.

12. ECOLOGICAL INFORMATION

Summary	Low water solubility with rapid volatilization from water and soil; moderately persistent in air; acute aquatic toxicity is generally low to moderate but the material should be prevented from entering waterways given its overall hazard profile.

13. DISPOSAL CONSIDERATIONS

Disposal Method	Dispose of as hazardous waste through a licensed specialist waste management/incineration facility in accordance with local regulations; avoid sealed-container storage of waste due to polymerization risk.

14. TRANSPORT INFORMATION

UN Number	UN1218
Transport Hazard Class	Class 3 (Flammable liquid)
Packing Group	I

15. REGULATORY INFORMATION

Notes	Key monomer for synthetic (polyisoprene) rubber production; classified as a carcinogen, mutagen and extremely flammable substance under GHS, OSHA HCS and EU CLP; regulated for transport under IMDG/ADR/IATA as UN1218 'Isoprene, stabilized', Class 3, Packing Group I; handling restricted to trained personnel with appropriate engineering controls.

16. OTHER INFORMATION

Prepared By	Suraj Chemicals, Technical / QA Desk
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Note	This SDS is compiled from well-established published GHS hazard classification data and general chemical reference sources for this substance, in the standard 16-section format. Values are believed accurate but Suraj Chemicals makes no warranty, express or implied, regarding their completeness. Users should evaluate suitability for their own specific use.

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