



MATERIAL SAFETY DATA SHEET

PRODUCT NAME: ISOPRENE

CAS Number: 78-79-5

1. IDENTIFICATION:

Product Code : 92740, 90909

Company Name : ADVENT CHEMBIO PRIVATE LIMITED

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2. HAZARDS IDENTIFICATION:**Hazard classification****Physical hazards**

Flammable liquids : Category 1

Health hazards

Germ cell mutagenicity : Category 2

Carcinogenicity : Category 1 B

Long-term (chronic) aquatic hazard : Category 3

Labels elements :

Hazard symbol :  

Signal word : Danger

Hazard statement : Extremely flammable liquid and vapour.
Suspected of causing genetic defects.
May cause cancer.
Harmful to aquatic life with long lasting effects.

Precautionary statement

Prevention : Obtain special instructions before use.
Do not breathe dust/ fume/ gas/ mist/ vapors/ spray. Do not handle until all safety precautions have been read and understood.
Wear protective gloves/ protective clothing/ eye protection/ face protection.
Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
Keep container tightly closed. Ground/ bond container and receiving equipment.
Use explosion-proof electrical/ ventilating/ lighting/ equipment.
Use only non-sparking tools. Take precautionary measures against static discharge.

Response : IF exposed or concerned: Get medical advice/ attention.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.



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	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
Storage	: Preserve in air-tight container under inert atmosphere and store at 2-8°C and away from light & moisture for long term usage.
Disposal	: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.
Other hazards which do not result in GHS classification	: Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.

3. COMPOSITION/ INFORMATION ON INGRADIENTS:

Ingredient	CAS Number	Percent	Hazardous
Isoprene	78-79-5	NLT 95.0%	Yes

4. FIRST AID MEASURES:

General information	: Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.
Ingestion	: Call a physician or poison control center immediately. Rinse mouth. Do NOT induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Inhalation	: Move to fresh air. Call a physician or poison control center immediately. If breathing stops, provide artificial respiration. If breathing is difficult, give oxygen.
Skin contact	: Get medical attention if symptoms persist.
Eye contact	: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.
Most important symptoms/effects, acute and delayed	: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.
Indication of immediate medical attention and special treatment needed	: Toxic if inhaled. Irritating to eyes, respiratory system and skin.
	: Symptoms may be delayed. Treat symptomatically.

5. FIRE FIGHTING MEASURES:

General information	: Flammable liquid and vapor.
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Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Foam, dry powder or carbon dioxide.
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Unsuitable extinguishing media	: For this substance/mixture no limitations of extinguishing agents are given.
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Special protective equipment and precautions for firefighters



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Special firefighting procedures	:	Fight fire from a protected location. Move containers from fire area if you can do so without risk.
Special protective equipment for fire-fighters	:	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

6. ACCIDENTAL RELEASE MEASURES:

Personal precautions, protective equipment and emergency procedures	:	ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Avoid breathing mists or vapors. Keep upwind. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away.
Methods and material for containment and cleaning up	:	Eliminate all ignition sources if safe to do so. Use only non-sparking tools. Take precautionary measures against static discharges. Stop leak if possible without any risk. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. Dike far ahead of larger spill for later recovery and disposal.
Notification Procedures	:	Prevent entry into waterways, sewer, basements or confined areas. Inform authorities if large amounts are involved.
Environmental precautions	:	Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. HANDLING AND STORAGE:

Precautions for safe handling	:	Do not handle until all safety precautions have been read and understood. DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Take precautionary measures against static discharges. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Wear protective gloves/protective clothing/eye protection/ face protection. Avoid contact with eyes, skin, and clothing. Do not breathe mist or vapor. Use only with adequate ventilation. Wash hands thoroughly after handling.
Conditions for safe storage, including any incompatibilities	:	Preserve in air-tight container under inert atmosphere and store at 2-8°C and away from light & moisture for long term usage.

8. EXPOSURE CONTROLS PERSONAL PROTECTION:**Control parameters****Appropriate engineering controls**

: No data available

Individual protection measures, such as personal protective equipment

General information	:	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area. Use explosion-proof ventilation equipment.
Eye/face protection	:	Wear safety glasses with side shields (or goggles).



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Hand protection	:	Chemical resistant gloves.
Other	:	Wear suitable protective clothing.
Respiratory protection	:	In case of inadequate ventilation use suitable respirator. Chemical respirator with organic vapor cartridge.
Hygiene measures	:	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Provide eyewash station and safety shower. Avoid contact with eyes, skin, and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance	:	Clear colorless to pale yellow liquid.
Odor	:	No data available
Solubility	:	No data available
Formula	:	C ₅ H ₈
Molecular Weight	:	68.12 g/mol
Specific Gravity	:	0.681 g/cm ³ (25 °C)
pH	:	No data available
% Volatiles by volume @ 21C (70F)	:	No data available
Boiling Point	:	34 °C
Melting Point	:	-146 °C
Flash Point	:	-54 °C
Vapor Density (Air=1)	:	No data available
Vapor Pressure (mm Hg)	:	634 hPa (21.1 °C)
Evaporation Rate (BuAc=1)	:	No data available

10. STABILITY AND REACTIVITY:

Reactivity	:	Vapours may form explosive mixture with air.
Chemical stability	:	Material is stable under ambient conditions..
Possibility of hazardous reactions	:	Hazardous reactions : Violent reactions possible with: fuming sulfuric acid Oxidizing agents sulfuric acid Nitric acid Reducing agents Alcohols halogens chlorosulfonic acid Violent polymerisation may be caused by: polymerisation initiators Ozone Acetone Peroxides.
Conditions to avoid	:	Heat and Warming.
Incompatible materials	:	Iron and copper compounds.
Hazardous decomposition products	:	In the event of fire: see section 5



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11. TOXICOLOGICAL INFORMATION:**Information on toxicological effects****Acute toxicity (list all possible routes of exposure)****Inhalation Product**

Oral: No data available LC50 Inhalation - Rat - 4 h - 180 mg/l - vapour Remarks:

Behavioral: General anesthetic.

: (RTECS)

LD50 Dermal - Rat - male and female - > 2.000 mg/kg

(OECD Test Guideline 402)

Repeated dose toxicity**Product**

: No data available.

Skin corrosion/irritation**Product**

: No data available.

Serious eye damage/eye**irritation Product**

: No data available.

Respiratory or skin**sensitization Product**

Maximisation Test - Guinea pig

: Result: negative

(OECD Test Guideline 406)

Carcinogenicity Product

: Presumed to have carcinogenic potential for humans.

IARC Monographs on the**Evaluation of Carcinogenic****Risks to Humans**

: No data available

US. National Toxicology**Program (NTP) Report on****Carcinogens**

: No data available

US. OSHA Specifically**Regulated Substances (29****CFR 1910.1001-1050**

: No data available.

Germ cell mutagenicity

Suspected of causing genetic defects.

Test Type: comet assay

Metabolic activation: with and without metabolic activation

Result: positive

Remarks: (ECHA)

Test Type: Ames test

Test system: Escherichia coli/Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

: Result: negative

Test Type: Mutagenicity (mammal cell test): chromosome aberration. Test system: Chinese

hamster ovary cells

Metabolic activation: with and without metabolic activation

Result: negative

Remarks: (ECHA)

Test Type: Chromosome aberration test

Species: Mouse

Cell type: Bone marrow

Application Route: inhalation (vapour)

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Method: OECD Test Guideline 475
Result: negative
Test Type: Micronucleus test
Species: Mouse
Cell type: Bone marrow
Application Route: inhalation (vapour)
Method: OECD Test Guideline 474
Result: positive

In vitro Product : No data available.

Reproductive toxicity Product : No data available.

Specific target organ toxicity - single exposure Product : No data available.

Specific target organ toxicity - repeated exposure Product : No data available.

Aspiration hazard Product : No data available.

Other effects : None known.

12. ECOLOGICAL INFORMATION:**Ecotoxicity****Acute hazards to the aquatic environment**

Fish Product LC50 (Oncorhynchus mykiss (rainbow trout)): 7,43 mg/l
End point: mortality
Exposure time: 96 h
: Test Type: semi-static test
Analytical monitoring: yes
Method: OECD Test Guideline 203
GLP: yes

Aquatic invertebrates Product EC50 (Daphnia magna (Water flea)): 5,77 mg/l
End point: Immobilization
Exposure time: 48 h
: Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 202
GLP: yes

Chronic hazards to the aquatic environment

Fish Product : No data available.

Aquatic invertebrates Product : No data available.

Toxicity to Aquatic Plants Product: : No data available.



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Persistence and degradability

Biodegradation Product : Test Type: aerobic
Inoculum: activated sludge
Concentration: 51 mg/l
Result: Readily biodegradable.
Biodegradation: 61 %
Exposure time: 28 d
Method: OECD Test Guideline 301F
GLP: yes

BOD/COD ratio Product : No data available.

Bioaccumulative potential

Bioconcentration factor (BCF) Product : No data available.

Partition coefficient n-octanol / water (log Kow) Product : No data available.

Mobility in soil : No data available

Other adverse effects : Discharge into the environment must be avoided.

13. DISPOSAL CONSIDERATION:

Disposal instructions : Discharge, treatment, or disposal may be subject to national, state, or local laws. Disposal recommendations are based on uncontaminated material.

Contaminated packaging : Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. TRANSPORT INFORMATION:

	UN No.	UN proper shipping name	Hazard Class(es)	Packaging group	Marine Pollutant
DOT	UN 1218	Isoprene	3	I	No
IMDG	UN 1218	Isoprene	3	I	No
IATA	UN 1218	Isoprene	3	I	No

15. REGULATORY INFORMATION:

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

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

No Data Available.

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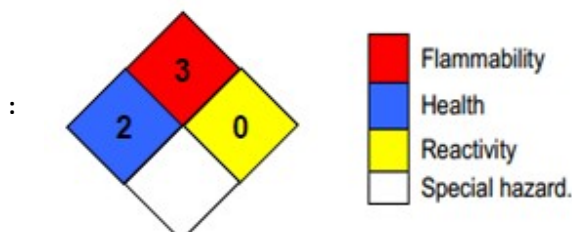
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16. OTHER INFORMATION:

NFPA Hazard ID



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

Issue Date : 26/05/2026

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