



MATERIAL SAFETY DATA SHEET

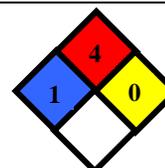


PROPYLENE

Section 1 – Chemical Product and Company Identification

Chemical Name : Propylene
Chemical Formula : Mixture of C₃H₆ and C₃H₈
CAS Number : 115-07-1
Synonyms : C3, Poly Propylene Feed Stock
General Use : Petrochemical industry

Manufacture's Name : Bharat Petroleum Corporation Limited
Address : Refinery, Mahul, Chembur, Mumbai 400074
Telephone Number for Info : 25533888 / 25533999 / 25524888 / 25524999
MSDS No. :
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NFPA 704 (Sec 16)

Section 2 – Composition / Information on Ingredients

Composition : Propane < 50 % v
Propylene > 50 % v

Hazardous Components : Propane, Propylene,
ACIGH TLV TWA : Propane – 2500 ppm,

Section 3 – Hazards Identification

Primary Entry Routes : Inhalation, skin
Acute Effects : Concentration in air greater than 10% causes dizziness in few minutes. 1% conc. gives the same symptoms in 10 mts. High concentration causes asphyxiation. Liquid on skin causes frostbite.

Carcinogenicity : Not listed as carcinogenic
Chronic Effects : No data available

Section 4 – First Aid Measures

Eyes : Flush with water for 15 min. Get medical attention.
Skin : Frost bite can occur and appropriate treatment for it to be given. Remove the wetted clothes. Wash with warm water & soap.
Inhalation : Remove to fresh air. Consult a physician if irritation persists.

Section 5 – Fire Fighting Measures

Flash Point : Very inflammable
Flash Point Method : Abel
Auto ignition Temperature : 497 °C
LEL : 2.0 %
UEL : 11.1 %
Flammability Classification : Flammable
Extinguishing Media : Foam, Dry Chemical Powder, CO₂
Unusual Fire or Explosion : Heat produces vapours and can cause violent rupture of

Hazards :	containers. Tanks can explode due to BLEVE effect. Being heavier than air vapours may travel long distance and flash back. Static electricity generation highly possible
Hazardous Combustion Products :	Carbon di oxide, carbon mono oxide,
Fire-Fighting Instructions :	Fires should not be extinguished until flow of product is not stopped. Shut off gas and allow the product to burn. Cool the surroundings with water spray. Fire fighters should wear self breathing apparatus while fighting fire

Section 6 – Accidental Release Measures

Small Spills :	Shut off leaks if safe to do so. Disperse vapours with water spray. Isolate area and take a gas test before entering. Warn everyone that the mixture is explosive.
Containment :	Prevent spillage from entering drains or water sources
Cleanup :	As the product vaporizes clean up not necessary.

Section 7 – Handling and Storage

Handling Precautions :	Do not use/store near heat/open flame. Avoid contact with liquid as frost bites can occur. Use gumboots, gloves while handling the product. Do not inhale. Stay upwind while handling the product. Tanks and dispensing equipments should be grounded to reduce static charge fires. It should be stored in closed containers away from heat & source of ignition. Avoid contact with skin and eyes. Wash thoroughly after handling
Storage Requirements :	Do not use/store near heat/open flame/water/acids.

Section 8 – Exposure Controls / Personal Protection

Engineering Controls :	Provide proper ventilation for environment to be below TWA. Use explosion proof electrical fittings in classified areas
Respiratory Protection :	Use respiratory protection if ventilation is improper
Protective Clothing / Equipment :	Use face shield, PVC gloves, safety boots while handling. Contaminated clothing to be immediately removed

Section 9 – Protection Physical and Chemical Properties

Physical State :	Gas at atm. pressure but handled as liquid in compressed stage
Appearance and Odour :	Colourless gas with no odour
Vapor Pressure :	> 152 psi at 38 °C (RVP)
Specific Gravity :	0.52 gm / cc at 15 °C
Water Solubility :	Insoluble
Boiling Point :	> - 47 °C
Freezing Point :	data not available
Vapour Density :	1.56 (Air = 1)

Section 10 – Stability and Reactivity

Stability :	Chemically stable.
Chemical Incompatibilities :	Incompatible with oxidizing agents.
Conditions to Avoid :	Avoid high temperatures and ignition sources including static electricity
Hazardous Decomposition	Carbon di oxide, carbon mono oxide,

Products :

Section 11 – Toxicological Information

ACIGH TLV TWA : Propane – 2500 ppm
Toxicity Data : LD50 (Oral-Rat) Not listed
Acute Inhalation Effects :

Section 12 – Ecological Information

Prevent spillage from entering drains or water sources. After spills wash area with soap and water preventing runoff from entering drains. Can burn with lot of heat producing CO₂ and CO.

Section 13 – Disposal Considerations

Disposal: Allow gas to burn under controlled conditions.
Waste must be disposed of in accordance with federal, state and local environmental control regulations

Section 14 – Transport Information

Shipping Name : Propylene

Section 15 – Regulatory Information

Non – Toxic / Highly Flammable Substance

Section 16 – Other Information

Avoid contact with oxidisers. Olefinic impurities may lead to narcotic effect or it may act as a simple asphyxiant. A very dangerous hazard when exposed to heat or flame. If fire is big, keep surrounding areas cool by spraying water.

Prepared by : Process Safety Section, BPCL – Mumbai Refinery

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