

Common Name: **ISOPRENE**

Synonyms: beta-Methylbivinyll; 2-Methylbutadiene

CAS No: 78-79-5

 Molecular Formula: C₅H₈

RTK Substance No: 1069

Description: Colorless, volatile liquid with a mild odor

HAZARD DATA

Hazard Rating	Firefighting	Reactivity
2 - Health 4 - Fire 2 - Reactivity DOT#: UN 1218 ERG Guide #: 130P Hazard Class: 3 (Flammable)	FLAMMABLE AND REACTIVE LIQUID Use dry chemical, CO ₂ , alcohol-resistant foam or other foam as extinguishing agents, as water may not be effective in fighting fires. POISONOUS GASES ARE PRODUCED IN FIRE. CONTAINERS MAY EXPLODE IN FIRE. Use water spray to keep fire-exposed containers cool. Vapors may travel to a source of ignition and flash back. Vapor is heavier than air and may travel a distance to cause a fire or explosion far from the source.	Isoprene can easily form EXPLOSIVE PEROXIDES and can polymerize (uncontrolled reaction) with heating or on contact with many materials, resulting in fires, explosions, and container rupture. Isoprene reacts violently with OXIDIZING AGENTS (such as PERCHLORATES, PEROXIDES, PERMANGANATES, CHLORATES, NITRATES, CHLORINE, BROMINE and FLUORINE); STRONG ACIDS (such as HYDROCHLORIC, SULFURIC and NITRIC); REDUCING AGENTS (such as LITHIUM, SODIUM, ALUMINUM and their HYDRIDES), OXYGEN; ALKALI METALS (such as POTASSIUM); STRONG BASES (such as SODIUM HYDROXIDE and POTASSIUM HYDROXIDE), AMMONIA; CHLORINATED SOLVENTS; ALCOHOLS, ACID CHLORIDES; ACID ANHYDRIDES; AMINES; ETHERS; and PHENOLS.

SPILL/LEAKS
Isolation Distance:

Small Spill: 60 meters (200 feet)

Large Spill: 270 meters (900 feet)

Fire: 800 meters (1/2 mile)

Absorb liquids in vermiculite, dry sand, earth, or a similar material and deposit in sealed containers.

 Keep **Isoprene** out of confined spaces, such as sewers, because of the possibility of an explosion.

This substance is harmful to aquatic organisms.

PHYSICAL PROPERTIES

Odor Threshold:	0.005 ppm
Flash Point:	-65°F (-54°C)
LEL:	2%
UEL:	9%
Auto Ignition Temp:	428°F (220°C)
Vapor Density:	2.4 (air = 1)
Vapor Pressure:	550 mm Hg at 77°F (25°C)
Specific Gravity:	0.68 (water = 1)
Water Solubility:	Slightly soluble
Boiling Point:	93°F (34°C)
Melting Point:	-231°F (-146°C)
Ionization Potential:	8.85+/- 0.02
Molecular Weight:	68.1

EXPOSURE LIMITS

 No occupational exposure limits have been established for **Isoprene**.

PROTECTIVE EQUIPMENT

Gloves:	Viton (6.2-hr breakthrough)
Coveralls:	DuPont Tychem® Responder®; Kappler® Zytron® 500; and Saint-Gobain ONESuit® TEC (>3-hr breakthrough for <i>Hydrocarbons, Polyenes</i>)
Respirator:	Supplied air

HEALTH EFFECTS

Eyes:	Irritation
Skin:	Irritation
Inhalation:	Nose, throat and lung irritation with coughing and wheezing Headache, dizziness, lightheadedness and passing out
Chronic:	Cancer (liver, lung, mammary gland) in animals

FIRST AID AND DECONTAMINATION

Remove the person from exposure.
Flush eyes with large amounts of water for at least 15 minutes. Remove contact lenses if worn.
Remove contaminated clothing and wash contaminated skin with soap and water.
Begin artificial respiration if breathing has stopped and CPR if necessary.
Transfer promptly to a medical facility.