

Common Name: **PROPANE**

Synonyms: Dimethylmethane; Propyl Hydride

CAS No: 74-98-6

 Molecular Formula: C₃H₈

RTK Substance No: 1594

Description: Colorless, odorless gas when pure, or may have a faint petroleum-like odor, and is usually shipped as a liquefied gas with a foul-smelling odorant added

HAZARD DATA

Hazard Rating	Firefighting	Reactivity
2 - Health 4 - Fire 0 - Reactivity DOT#: UN 1978 ERG Guide #: 115 Hazard Class: 2.1 (Flammable gas)	FLAMMABLE GAS Stop flow of gas and use water spray to disperse vapors. POISONOUS GASES ARE PRODUCED IN FIRE. CONTAINERS MAY EXPLODE IN FIRE. Use water spray to keep fire-exposed containers cool. Vapor is heavier than air and may travel a distance to cause a fire or explosion far from the source or flash back. Flow, agitation, low humidity and other factors may generate electrostatic charges resulting in fire and/or explosion. Propane may form an ignitable vapor/air mixture in closed tanks or containers.	Propane may react violently with CHLORINE DIOXIDE and other OXIDIZING AGENTS (such as PERCHLORATES, PEROXIDES, PERMANGANATES, CHLORATES, NITRATES, CHLORINE, BROMINE and FLUORINE).

SPILL/LEAKS
Isolation Distance:

Spill: 100 meters (330 feet) Fire: 1,600 meters (1 mile)

Stop flow of gas. If source of leak is a cylinder and the leak cannot be stopped in place, remove the leaking cylinder to a safe place in the open air, and repair leak or allow cylinder to empty.

 Conduct air monitoring to determine that *Oxygen* levels are above 19.5% and the Lower Explosive Limit (LEL) is not being exceeded.

 Use only non-sparking tools and equipment, especially when opening and closing containers of **Propane**.

Propane may "pool" or "settle" in low areas and may remain in a fixed location for a long period of time.

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

Turn leaking cylinder with leak up to prevent escape of gas in liquid state.

Propane is not harmful to aquatic life.

PHYSICAL PROPERTIES

Odor Threshold:	20,000 ppm
Flash Point:	-155°F (-104°C)
LEL:	2.1%
UEL:	9.5%
Auto Ignition Temp:	842°F (450°C)
Vapor Density:	1.6 (air = 1)
Vapor Pressure:	>760 mm Hg at 68°F (20°C)
Specific Gravity:	0.58 (water = 1)
Water Solubility:	Slightly soluble
Boiling Point:	-44°F (-42°C)
Freezing Point:	-305.9°F (-187.7°C)
Critical Temperature:	207°F (97°C)
Ionization Potential:	11.07 eV
Molecular Weight:	44.09

EXPOSURE LIMITS

OSHA: 1,000 ppm, 8-hr TWA
NIOSH: 1,000 ppm, 10-hr TWA
ACGIH: 1,000 ppm, 8-hr TWA
IDLH: 2,100 ppm

The Protective Action Criteria values are:

PAC-1 = 5,500 ppm PAC-2 = 17,000 ppm
 PAC-3 = 33,000 ppm

PROTECTIVE EQUIPMENT

Gloves: *Insulated* Nitrile or Neoprene (>8-hr breakthrough)
Coveralls: **Use turn out gear or flash protection if ignition/fire is the greatest hazard!**
 Tychem® Responder® (>8-hr breakthrough)
Respirator: >1,000 ppm or <19.5% *Oxygen* - SCBA

HEALTH EFFECTS

Eyes: Contact with liquefied gas may cause frostbite
Skin: Contact with liquefied gas may cause frostbite
Inhalation: Headache, dizziness, lightheadedness, passing out, and death

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. Seek medical attention.
Immerse affected part in warm water. Seek medical attention.
Begin artificial respiration if breathing has stopped and CPR if necessary.
Transfer promptly to a medical facility.