



MATERIAL SAFETY DATA OF LPG

1 CHEMICAL IDENTITY

Chemical Name : LIQUEFIED PETROLEUM GAS	Chemical Classification : Hydrocarbon Mixture		
Synonyms: LPG, Propane, Butane, Propylene, Purofax, Bottled Gas.	Trade Name : LPG		
Formula C ₃ H ₈ , C ₄ H ₁₀ (Mixture)	C.A.S.NO. 68476-85-7	UN. No. 1075	
Regulated Identification	Shipping Name: Petroleum Gases, Liquefied. Codes/Label : Flammable, Class 2 Hazardous waste I.D. No: 5 Hazchem Code : 2 W E		
HAZARDOUS INGREDIENTS	C.A.S.NO.	HAZARDOUS INGREDIENTS	C.A.S.NO.
1. Propane	74-98-6	3. Propylene	115-07-1
2. Butane	106-97-8	4.	

2. PHYSICAL AND CHEMICAL DATA

Boiling Point/Range °C	>-40	Physical State : Gas at 15 °C and 1 atm.	Appearance : Colourless
Melting / Freezing Point °C	Not Pertinent	Vapour pressure @ 35°C Not available	Odour: Mercaptan added as an odouriser
Vapour Density (Air = 1)	1.5	Solubility in water @ 30°C	Others: Soluble in Organic Solvents, Alcohol
Specific Gravity (Water = 1)	0.51-0.58 at 50°C	pH	Not pertinent



3. FIRE AND EXPLOSION HAZARD DATA

Flammability	Yes	LEL	1.9%	Flash Point °C	-	(OC)
TDG Flammability	2	UEL	9.5%	Flash Point °C	- 104.4	(CC)
Auto ignition Temperature °C	466.1 Propane, 405 Butane					
Explosion Sensitivity to Impact	Not established					
Explosion Sensitivity to Static Electricity	May explode.					
Hazardous Combustion products	Emits CO, CO ₂					
Hazardous Polymerization	Does not occur					
Combustible Liquid	No	Explosive Material	No	Corrosive Material	No	
Flammable Material	Yes	Oxidiser	No	Others		
Pyrophoric Material	No	Organic Peroxide	No			

4. REACTIVITY DATA

Chemical Stability	Stable
Incompatibility with other material.	Strong Oxidisers.
Reactivity	No reaction with common materials but may react with oxidising materials.
Hazardous Reaction Products	Not available.

5. HEALTH HAZARD DATA

Routes of Entry	Inhalation, Skin.					
Effects of Exposure/ Symptoms	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.					
Emergency Treatment	If inhaled, remove the victim to fresh air area. Provide artificial resuscitation. Skin: Remove the wetted clothes & wash the affected area with plenty of water. Eyes: Flush with plenty of water for 15 mins. Seek medical aid immediately.					
L.D ₅₀ (Oral-Rat)	Not listed	mg/kg	L.D ₅₀			
Permissible Exposure Limit	Not listed	ppm	Not listed	mg/m ³	Odour Threshold	5000 to 20000 ppm mg/m ³
TLV (ACGIH)	1000 ppm	1800	mg/m ³	STEL	Not listed ppm	Not listed mg/m ³
NFPA Hazard Signals	Health	Flammability	Reactivity/Stability	Special		
	1	4	0			



6. PREVENTIVE MEASURES

Personal Protective Equipment.	Avoid contact with liquid or gas. Provide hand gloves, safety goggles, gas mask, protective over-clothing and shoes.
Handling and Storage Precautions	Keep in tightly closed cylinders in a cool, well ventilated area, away from heat, flame, sparks.

7. EMERGENCY AND FIRST AID MEASURES

FIRE	Fire Extinguishing Media	CO ₂ , Dry Chemical Powder, Water Spray.
	Special Procedure	Keep the containers cool by spraying water if exposed to fire or heat.
	Unusual Hazards	If not cooled sufficiently, containers will explode in fire.
EXPOSURE	First Aid Measures	If inhaled, remove the victim to open air area & artificial resuscitation may be provided if required. If skin is affected with the liquid, remove the clothing & wash the affected area with plenty of water. Seek medical aid.
	Antidotes/Dosages	Not available.
SPILLS	Steps to be taken	Shut off leaks if without risk. Warn everybody that air mixture is explosive.
	Waste Disposal Method	Allow gas to burn under control.

8. ADDITIONAL INFORMATION/REFERENCES

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.