

Gas Properties - Propane

Gas Name	Chemical Formula	Chemical Family
Propane	C ₃ H ₈	Alkane - Hydrocarbon
Synonym(s)	Dimethylmethane, LP-Gas, LPG	

Molecular Weight	Critical Pressure (psia)	Critical Temperature (R)	Ratio of Specific Heats		
44.090	661	666	1.14		
Physical Characteristics		Solubility			
Colorless. Liquefied, flammable gas with a Natural Gas odor. Turns gaseous at atmospheric pressure and temperature.		Almost insoluble in water, but highly soluble in alcohol and petroleum products.			
Applications or Uses					
Fuels. Used as a solvent. Refrigerant Applications. Food additive. Aerosol propellant.					
Hazards					
Asphyxiant. Very heavy gas, collects in low level areas. Dispersible over a large area and does not dissipate into atmosphere. Long range ignition possible. Handle in well ventilated areas.					
Material Requirements					
Standard materials of construction. Due to typical low temperatures in many applications, must ensure all materials are acceptable for temperature.					
Lubrication					
Has a tendency to dissolve into lube oil, thereby reducing oil viscosity.					
Comments (see also Propane Service topic)					
In propane applications, it is very important to analyze gas mixture to verify properties at actual operating conditions. In lower suction temperature applications, like refrigeration service, the first interstage may not require cooling.					