WHAT IS LP-GAS?

Propane, the primary LP-Gas is a hydrocarbon. This means it is made up solely of hydrogen and carbon atoms. The chemical compound for propane is C3H8, three parts carbon and eight parts hydrogen.

Characteristics common to LP-Gases include:

- They are tasteless, colorless and usually odorless until an odorant is added.
- When mixed with the proper proportions of air, they can burn.
- LP-Gases are capable of being a solid, liquid or gas (vapor) under varying conditions.
- Except for vapor pipelines, LP-Gases are stored and transported as liquids under pressure and readily vaporize into gas under surrounding conditions.
- In moderate outdoor temperatures, when liquid LP-Gases are released to atmospheric pressure, they readily vaporize and expand.
- LP-Gases expand when heated. If stored inside a container, this expansion will increase the volume of the liquid and the pressure of the vapor and liquid inside the container.
- LP-Gases, although not toxic, present an inhalation hazard if inhaled in a liquid state, and a possible inhalation hazard if inhaled in vapor state, if the vapor displaces air in a confined space.

Odorants: Gas Warning Agents.

Because propane and other LP-Gases in their processed states are odorless and colorless, a commercial odorant, typically ethyl mercaptan, is added at the rate of at least one pound per 10,000 gallons of LP-Gas.

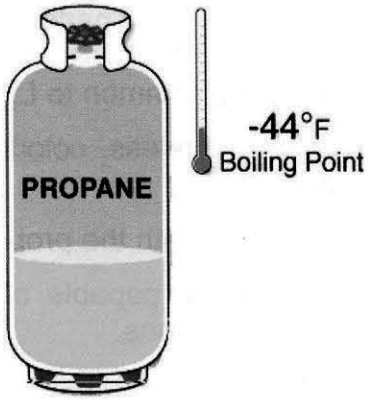
Purpose of Effective Odorization:

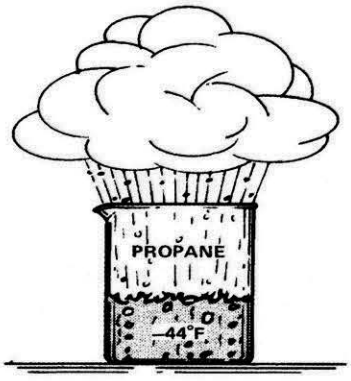
- It permits the detection of leaks into the environments before gas concentrations in air reach a flammable level.
- It reduces gas losses through early detection and repair of leaking pipes, fittings, and storage container fixtures.

Identifying the Effects of Pressure and Temperature on Propane

Propane's volume, pressure, and physical state (liquid or vapor) vary when it is stored in containers under varying conditions.

The normal atmospheric boiling point for propane is -44°F.

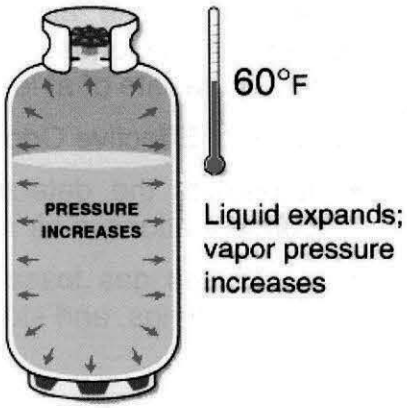




At any temperature above its normal boiling point of -44°F, propane will immediately boil off into vapor.

Because of its low boiling point, propane is stored and transported in pressure-tight containers called tanks or cylinders.

When placed in pressure-tight containers, propane can be stored as a liquid under pressure above its normal boiling point.



Liquid expands; vapor pressure increases