



APR 16 1990

Ferrellgas

One Liberty Plaza • Liberty, MO 64068

MATERIAL SAFETY DATA SHEET

PROPANE

Section I

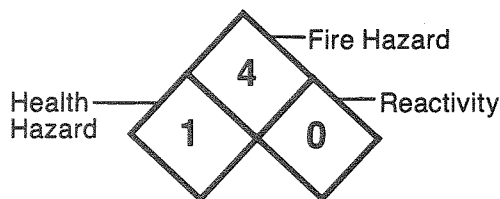
Supplier's Name:
Ferrellgas
Address:
One Liberty Plaza
Liberty, Missouri 64068

24 Hour Emergency Telephone Number:
CHEMTREC 800 424-9300
Telephone Number for Information:
(816) 792-1600
Date Prepared
10/01/89, replaces MSDS dated 11/01/87

Section II – Hazardous Ingredients/Identity Information

Hazardous Component:
Propane (74-98-6)
Exposure Limit:
ACGIH — Classed as a simple asphyxiant
OSHA PEL — 1,000 ppm
Identity Information:
Chemical Name or Synonym: Liquefied Petroleum Gas
Chemical Family: Alkane Hydrocarbon
Chemical Formula: C³ H⁸
Proper Shipping Name: Liquefied Petroleum Gas
Hazardous Classification: "Flammable Gas"
DOT Identification: UN 1075
Label(s) Required: Flammable, Class 2

NFPA Hazard Rating



4 — Severe
3 — Serious
2 — Moderate
1 — Slight
0 — Minimal

Section III – Physical/Chemical Characteristics

Boiling Point: -44°F
Vapor Pressure: 208 psig (max) @ 100°F
Vapor Density (Air = 1): 1.52
Solubility in Water: Slightly
Liquid to Vapor Expansion Ratio: 1:270
Volatiles, % by Volume: 100

Specific Gravity (H₂O = 1): 0.51
Melting Point: N/A
Evaporation Rate (Butyl Acetate = 1): diffuses readily, <1
Appearance and Odor: Clear, unpleasant odor similar to garlic (odorized by - Ethyl Mercaptan)
Molecular Weight: 44.096

Section IV – Fire and Explosion Hazard Data

Flash Point: -156°F
Auto Ignition Temperature: 940°F
LEL: 2.15% **UEL:** 9.60%
Extinguishing Media: Dry Chemical Class A-B-C, CO₂, Water Spray or BC Fire Extinguisher
Special Fire Fighting Procedures: Stop flow of gas. Use water to keep fire-exposed containers cool. Use water spray to disperse unignited gas or vapor. Use self-contained breathing apparatus in confined spaces. Isolate area until gas dissipates completely.
Unusual Fire and Explosion Hazards: Flammable liquid and gas under pressure. May form explosive mixtures with air. Fire exposed containers may rupture explosively.

Section V – Reactivity Data

Stability: Stable

Conditions to Avoid: Heat sparks, flame and build-up of static electricity. Prevent vapor accumulation

Incompatibility (Materials to Avoid): Strong Oxidizers

Hazardous Decomposition or Byproducts: Carbon Monoxide

Hazardous Polymerization: Will Not Occur

Section VI – Health Hazard Data

Route(s) of Entry: Skin - Frostbite (Primary) Lungs - Inhalation (Primary) Ingestion - N/A

Health Hazards (Acute and Chronic): Classified as a simple asphyxiant, minimal oxygen content should be 19.5% by volume under normal atmospheric conditions (ACGIH). Central nervous system depressant. May cause anemia and irregular heart rhythm.

Carcinogenicity: Non-carcinogenic NTP: N/A IARC Monographs: N/A OSHA Regulated: N/A

Signs and Symptoms of Exposure: High concentration can lead to symptoms ranging from dizziness to anesthesia and respiratory arrest if inhaled. Eyes can be moderately irritated.

Medical Conditions Generally Aggravated by Exposure: Caution is recommended for personnel with pre-existing central nervous system or chronic respiratory diseases.

Emergency and First Aid Procedures: Remove to fresh air. If not breathing, administer air, oxygen or CPR.
Skin - keep affected area warm and submerge in lukewarm water. Flush eyes immediately with water.

Section VII – Precautions for Safe Handling and Use

Steps to Be Taken in Case Material Is Released or Spilled: Keep public away. Shut off gas supply. Eliminate sources of ignition. Ventilate area. Disperse with water spray. Contact between skin and these gases can cause freezing of tissue.

Waste Disposal Method: Controlled burning in compliance with applicable codes and laws. Contact supplier.

Precautions to Be Taken in Handling and Storing: Keep containers away from heat sources and store containers in upright position. Containers should not be dropped. Container temperature should not exceed 130°F (54.4 C).

Other Precautions: Close container service valve when not in use and when empty. Install protective cap when not connected for use. Containers, even those that have been emptied, can contain explosive vapors. Do not cut, drill, grind, weld or perform similar operations on or near containers.

Section VIII – Control Measures

Respiratory Protection: Use NIOSH or MSHA approved equipment when airborne exposure limits are exceeded.

Ventilation: Provide adequate ventilation where this product is used to meet TLV requirements and to keep concentration in air below 25% of the L.E.L. Mechanical ventilators must meet N.E.C. requirements for being explosion proof.

Protective Gloves: Impervious plastic or neoprene-coated canvas.

Eye Protection: Chemical-type goggles and face shield

Other Protective Clothing or Equipment: N/A

Work/Hygienic Practices: Avoid breathing gas, secure and evacuate area if gas is smelled.

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