

MATERIAL SAFETY DATA SHEET

BLOSSMAN GAS, INC. P.O. BOX 1110 OCEAN SPRINGS, MS 39566-1110

A. IDENTIFICATION AND EMERGENCY INFORMATION

PRODUCT NAME: LP Gas Propane with Odorant

PRODUCT CATEGORY: Liquefied Petroleum Gas

PRODUCT APPEARANCE AND ODOR: Vapor and liquid are colorless. Product contains stenching agent.

EMERGENCY TELEPHONE NUMBER: 800/424-9300 CHEMTREC HOME OFFICE TELEPHONE NUMBER: (601) 875-2261

B. COMPONENTS AND HAZARD INFORMATION

COMPONENTS:

Propane

CAS NO. OF COMPONENTS:

74-98-6

APPROXIMATE CONCENTRATION:

100%

All components of this product are listed on the U.S. TSCA inventory.

See Section E for Health and Hazard Information.

See Section H for additional Environmental Information.

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM (HMIS):

Health

1

Flammability

4

Reactivity

0

Basis

Recommended by Blossman Gas

EXPOSURE LIMIT FOR TOTAL PRODUCT:

1000 ppm (1800 mg/m³) for an eight-hour work day.

BASIS:

OSHA Regulation 29 CFR 1910.1000. Although OSHA lists no short term exposure limit (STEL), Blossman recommends a STEL of 1500 PPM (2700 mg/m³).

C. PRIMARY ROUTES OF ENTRY AND EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT:

If liquid gets into eyes, contact a physician immediately.

SKIN:

In case of excessive skin contact with liquid, immediately contact a physician for treatment of frostbite.

INHALATION:

If overcome by vapor, remove from exposure and call a physician immediately. If breathing is irregular or has stopped, start resuscitation, administer oxygen, if available.

INGESTION:

If ingested, do not induce vomiting; call a physician immediately.

D. FIRE AND EXPLOSION HAZARD INFORMATION

UNUSUAL FIRE AND EXPLOSION HAZARD:

EXTREMELY FLAMMABLE - VAPORS CAN TRAVEL AND EXPLODE

FLASH POINT (MINIMUM):

Extremely flammable - per DOT 49 CFR 173.115
Less than -18°C (0°F)
ASTM D 56, Tag Closed Cup

AUTOIGNITION TEMPERATURE:

Approximately 450°C (842°F)
National Fire Protection Association's Guide on Hazardous Materials

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) - HAZARD IDENTIFICATION:

Health

1

Flammability

4

Reactivity

0

Basis

Recommended by The National Fire Protection Association

HANDLING PRECAUTIONS:

This liquid is volatile and gives off invisible vapors. Either the liquid or vapor may settle in low areas or travel some distance along the ground or surface to ignition sources where they may ignite or explode.

Keep product away from ignition sources, such as heat, sparks, pilot lights, static electricity, and open flames.

DETECTION INFORMATION:

Because of the hazardous nature of propane, an odorant, or "stenching agent" is added to help detect a potentially hazardous leak. Blossman, like many other propane dealers, uses ethyl mercaptan as the odorant, having it added in a ratio of 1.5 lb. per 10,000 gallons of propane - well above the minimum of 1.0 lb. per 10,000 gallons recommended by the National Fire Protection Association (NFPA).

However, ethyl mercaptan, or any other odorant, may not be effective in all cases all the time and must not be exclusively relied on as a safety measure. This fact is recognized by the NFPA, which states in its "Standard for the Storage and Handling of Liquefied Petroleum Gases:" that "no odorant will be completely effective as a warning agent in every circumstance."

It is therefore essential that propane be used and handled in strict adherence to the safety procedures established by appropriate federal agencies and industrial organizations, such as the NFPA. Codes, standards, and recommended practices regarding propane are contained in "National Fire Codes," published by the NFPA, Batterymarch Park, Quincy, MA 02269.

FLAMMABLE OR EXPLOSIVE LIMITS (APPROXIMATE PERCENT BY VOLUME IN AIR)

Estimated values: Lower Flammable Limit 2.1%

Upper Flammable Limit 9.5%

EXTINGUISHING MEDIA AND FIRE FIGHTING PROCEDURES:

Plan fire protection and response strategy through consultation with local fire protection authorities or appropriate specialists.

The following procedures for this type of product are based on the recommendations in the National Fire Protection Association's "Fire Protection Guide on Hazardous Materials", Eighth Edition (1984):

Stop flow of gas. Use water to keep fire-exposed containers cool and to protect men effecting the shutoff. If a leak or spill has not ignited, use water spray to disperse the gas or vapor and to protect men attempting to stop a leak. Minimize breathing gases, vapor, fumes or decomposition products. Use supplied-air breathing equipment for enclosed or confined spaces or as otherwise needed.

DECOMPOSITION PRODUCTS UNDER FIRE CONDITIONS:

Fumes, smoke, carbon monoxide, aldehydes and other decomposition products, in the case of incomplete combustion.

"EMPTY" CONTAINER WARNING:

"Empty" containers retain residue (liquid and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition; they may explode and cause injury or death. Do not attempt to clean since residue is difficult to remove. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations. For work on tanks refer to Occupational Safety and Health Administration regulations, ANSI Z49 1, and other governmental and industrial references pertaining to cleaning, repairing, welding, or other contemplated operations.

E. HEALTH AND HAZARD INFORMATION

VARIABILITY AMONG INDIVIDUALS:

Health studies have shown that many petroleum hydrocarbons and synthetic lubricants pose potential human health risks which may vary from person to person. As a precaution, exposure to liquids, vapors, mists or fumes should be minimized.

EFFECTS OF OVEREXPOSURE (SIGNS AND SYMPTOMS OF EXPOSURE):

Overexposure may cause gasping, disorientation, unconsciousness and possibly death. Treat for asphyxiation. Exposure to rapidly expanding gas or vaporizing liquid may cause frostbite (cold burn).

NATURE OF HAZARD AND TOXICITY INFORMATION:

Prolonged or repeated skin contact with this product tends to remove skin oils possibly leading to irritation and dermatitis; however, based on human experience and available toxicological data, this product is judged to be neither a "corrosive" nor an "irritant" by OSHA criteria.

Product contacting the eyes may cause eye irritation.

Based on scientific literature, this product should be regarded as a central nervous system depressant that is capable of producing drowsiness or similar effects at concentrations near 2000 PPM. Refer to section I for protection and precautions.

Product has a low order of acute inhalation toxicity. It is classed as a simple asphyxiant by the American Conference of Governmental Industrial Hygienists.

This product is judged to have an acute oral LD50 (rat) greater than 5 g/kg of body weight, and an acute dermal LD50 (rabbit) greater than 3.16 g/kg of body weight.

Inhalation of components of exhaust from burning, such as carbon monoxide, may cause death at high concentrations. Exposure to the exhaust of this fuel should be minimized.

Continued exposure to odorized gases may result in the inability to smell the gas at a dangerous or hazardous concentration. Proper respiratory protection, fire and explosion precautions should be utilized whenever gas odor is first detected.

PRE-EXISTING MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED BY EXPOSURE:

None recognized.

F. PHYSICAL DATA

The following data are approximate or typical values and should not be used for precise design purposes.

BOILING RANGE:

Approximately -45°C (-49°F) IBP
to 0°C (32°F) FBP

VAPOR PRESSURE:

Approximately 208 psig @ 100°F
ASTM D 1267

SPECIFIC GRAVITY (15.6 C/15.6 C):

0.50

VAPOR DENSITY (AIR = 1)

1.5

MOLECULAR WEIGHT:

Approximately 45

PERCENT VOLATILE BY VOLUME:

100

pH:

Essentially neutral.

EVAPORATION RATE @ 1 ATM, AND 25°C (77°F) (n-BUTYL ACETATE = 1):

Gas at normal ambient conditions

POUR, CONGEALING OR MELTING POINT:

Gas at ambient temperature

SOLUBILITY IN WATER @ 1 ATM. AND 25°C (77°F):

Negligible; less than 0.1%.

VISCOSITY:

Not determined.

CORROSION - Copper Strip (1 hour @ 100° F)

Maximum classification of 1 per ASTM D 1838

G. REACTIVITY

This product is stable and will not react violently with water. Hazardous polymerization will not occur. Avoid contact with strong oxidants such as liquid chlorine, concentrated oxygen, sodium hypochlorite or calcium hypochlorite, etc., as this presents a serious explosion hazard.

H. ENVIRONMENTAL INFORMATION

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Shut off and eliminate all ignition sources. Keep people away. Minimize breathing vapors. Minimize skin contact. Ventilate confined spaces. Open all windows and doors. Refer to Section D concerning fire and explosion hazards.

The very high volatility of this material will cause extremely rapid evaporation, and no other disposal method is needed or should be attempted.

The following information may be useful in complying with various state and federal laws and regulations under various environmental statutes:

REPORTABLE QUANTITY (RQ), EPA REGULATION 40 CFR 302 (CERCLA Section 102):

No RQ for product or any constituent greater than 1% or 0.1% (Carcinogen).

THRESHOLD PLANNING QUANTITY (TPQ), EPA REGULATION 40 CFR 355 (SARA Sections 301-304):

No TPQ for product or any constituent greater than 1% or 0.1% (Carcinogen).

TOXIC CHEMICAL RELEASE REPORTING, EPA REGULATION 40 CFR 372 (SARA Section 313):

No toxic chemical is present greater than 1% or 0.1% (Carcinogen).

HAZARDOUS CHEMICAL REPORTING, EPA REGULATION 40 CFR 370 (SARA Section 311-312)

EPA HAZARD CLASSIFICATION CODE:

Acute HAZARD XXX	Chronic HAZARD	Fire HAZARD XXX	Pressure HAZARD XXX	Reactive HAZARD	Not Applicable
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I. PROTECTION AND PRECAUTIONS

VENTILATION:

Use only with ventilation sufficient to prevent exceeding recommended exposure limit or buildup of explosive concentrations of vapor in air. No smoking, or use of flame or other ignition sources.

RESPIRATORY PROTECTION:

Use supplied-air respiratory protection in confined or enclosed spaces, when concentrations exceed 2100 PPM (3780 mg/m3).

PROTECTIVE GLOVES:

Use chemical-resistant gloves, if needed, to avoid prolonged or repeated skin contact.

EYE PROTECTION:

Safety glasses recommended.

OTHER PROTECTIVE EQUIPMENT:

Use chemical-resistant apron or other clothing, if needed, to avoid skin contact (frostbite protection).

WORK PRACTICES/ENGINEERING CONTROLS:

DANGER: This product is a compressed gas. Do not store near heat, sparks, flame or strong oxidants.

The very high volatility of this material will cause extremely rapid evaporation. Keep containers closed when not in use. Do not fill or store near heat, sparks, flame or strong oxidants. Avoid creating static electricity.

In order to prevent fire or explosion hazards use appropriate equipment. Information on electrical equipment appropriate for use with this product may be found in the latest edition of the National Electrician Code (NFPA-70). This document is available from the National Fire Protection Association, Batterymarch Park, Quincy, Massachusetts 02269.

PERSONAL HYGIENE:

Minimize breathing vapor or mist. Avoid prolonged or repeated contact with skin. Remove contaminated clothing; launder or dry-clean before reuse. Remove contaminated shoes and thoroughly clean and dry before reuse. Cleanse skin thoroughly after contact, before breaks and meals, and at end of work period.

J. TRANSPORTATION AND OSHA RELATED LABEL INFORMATION

TRANSPORTATION INCIDENT INFORMATION:

For further information relative to spills resulting from transportation incidents, refer to latest Department of Transportation Emergency Response Guidebook for Hazardous Materials Incidents.

U.S. DOT HAZARDOUS MATERIAL SHIPPING DESCRIPTION:

Liquefied Petroleum Gas / Flammable Gas, 2.1, UN 1075

OSHA REQUIRED LABEL INFORMATION:

In compliance with hazard and right-to-know requirements, where applicable OSHA Hazard Warnings may be found on the label, bill of lading or invoice accompanying this shipment.

DANGER!

EXTREMELY FLAMMABLE

ASPHYXIAN

**MATERIAL REDUCES OXYGEN AVAILABLE FOR BREATHING
PROLONGED CONTACT MAY CAUSE FROSTBITE**

Note: Product label may contain non-OSHA related information also.

The information and recommendations contained herein are, to the best of Blossman's knowledge and belief, accurate and reliable as of the date issued. Blossman does not warrant or guarantee their accuracy or reliability, and Blossman shall not be liable for any loss or damage arising out of the use thereof.

The information and recommendations are offered for the user's considerations and examination, and it is the user's responsibility to satisfy itself that they are suitable and complete for its particular use. If buyer repackages this product, legal council should be consulted to insure proper health, safety and other necessary information is included on the container.

The Environmental Information included under Section H hereof as well as the Hazardous Materials Identification system (HMIS) and National Fire Protection Association (NFPA) rating have been included by Blossman Gas, Inc. in order to provide additional health and hazard classification information. The ratings recommended are based upon the criteria supplied by the developers of these rating systems, together with Blossman's interpretation of the available data.
