

MATERIAL SAFETY DATA SHEET

CHEMWELD, INC. 4530 BERKELEY LAKE RD P.O. BOX 1127 NORC

A. IDENTIFICATION AND EMERGENCY INFORMATION

PRODUCT NAME: Chem-O-Lene Fuel Gas

PRODUCT CATEGORY: Liquefied Petroleum Gas

PRODUCT APPEARANCE AND ODOR: Vapor and liquid are colorless. Product contains no odorant agent.

EMERGENCY TELEPHONE NUMBER: 800/241-4919 or 770/662-0370

B. COMPONENTS AND HAZARD INFORMATION

COMPONENTS:	CAS NO. OF COMPONENTS: CONCENTRATION:	APPROXIMATE
Propane	74986	8%
Xylene	1330-20-7	0.1%
Ethane	78-84-0	
Propylene	115071	
Butanes	106978	
Pentane	109-66-0	

This product, as sold by Chemweld, is not listed as a carcinogen.

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.

EXPOSURE LIMIT FOR TOTAL PRODUCT:

OSHA permissible exposure limit (PEL) 1000 ppm for an 8-hour workday

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. Do not induce vomiting. Frostbite.

INHALATION:

If overcome by vapor, remove from exposure and call a physician immediately. If 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

FLASHPOINT (MINIMUM)

-156 Degrees F (CC)

CLASSIFICATION:

Flammable Gas UN 1075

CAUTION!

Defective or improperly installed Chem-O-Lene equipment can cause leakage, resulting in asphyxiation, fire, or explosion; poorly vented equipment or incomplete combustion may produce a build up of deadly carbon monoxide.

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. Chemweld, 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 Chem-O-Lene be used and handled in strict adherence to the safety procedures established by appropriate federal agencies and industrial organizations, such as NFPA. Codes, standards, and recommended practices regarding propane are contained in the "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 2.15%

Upper Flammable Limit: 9.60%

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", Tenth Edition (1991):

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 self-supplied-air breathing equipment for enclosed or confined spaces or as otherwise needed.

DECOMPOSITION PRODUCTS UNDER FIRE CONDITIONS:

Fumes, smoke, carbon monoxide, sulphur oxides, aldehydes and other decomposition products, in the

"EMPTY" CONTAINER WARNING:

"Empty" containers retain residue (Liquid and/or vapor) and weld, braze, solder, drill, grind or expose such containers to sources of ignition; they may explode and cause injury or death. Residue is difficult to remove. All containers should be disposed of in accordance with governmental regulations. For work on tanks, see OSHA Administration regulations, ANSI Z49 1, and other governmental regulations. Cleaning, repairing, welding, or other contemplated operations should be done in accordance with applicable regulations.

E. HEALTH AND HAZARD

VARIABILITY AMONG INDIVIDUALS:

Health studies have shown that many petroleum hydrocarbons pose human health risks which may vary from person to person. Exposure to mists or fumes should be minimized.

EFFECTS OF OVEREXPOSURE (SIGNS AND SYMPTOMS):

Overexposure may cause gasping, disorientation, unconsciousness, and asphyxiation. Exposure to rapidly expanding gas or vaporized liquid should be avoided.

NATURE OF HAZARD AND TOXICITY INFORMATION:

Prolonged or repeated skin contact with this product tends to cause irritation and dermatitis; however, based on human experience, this product is judged to be neither a "corrosive" nor an "irritant".

Product contacting the eyes may cause eye irritation.

Based on scientific literature, this product should be regarded as a narcotic and is capable of producing drowsiness or similar effects at concentrations above 1000 ppm for protection and precautions.

Product has a low order of acute inhalation toxicity. It is classified as "Hazardous" by the Conference of Governmental Industrial Hygienists.

This product is judged to have an inhalation LC50 (rat) greater than 1000 ppm.

Inhalation of components of exhaust from burning, such as carbon monoxide, is a hazard at concentrations above 1000 ppm. Exposure to the exhaust of this fuel should be avoided.

Continued exposure to odorized gases may result in the inhalation of a hazardous concentration. Proper respiratory protection, fire extinguishers, and other safety equipment should be used whenever gas odor is first detected.

PRE-EXISTING MEDICAL CONDITIONS WHICH MAY BE AFFECTED:

None recognized.

F. PHYSICAL DATA

Following data are approximate or typical values and should not be used for

TEMPERATURE RANGE:

Approximately -45 C (-49 F) IBP
(34 F) FBP

VAPOR PRESSURE:

Approximately 208 PSIG @ 100 F
ASTM D 1267

DENSITY (15.6 C/15.6):

0.50

VAPOR DENSITY (AIR =1)

1.5

MOLECULAR WEIGHT:

Approximately 45

PERCENT VOLATILE BY VOLUME:

100

Initially neutral

EVAPORATION RATE @ 1 ATM (n-BUTYL ACETATE =1):

Gas at normal ambient conditions

MELTING POINT, CONGEALING OR FREEZING POT:

At ambient temperature

SOLUBILITY IN WATER @ 1 ATM 25 C (77 F) n-BUTYLACETATE:

Negligible; less than 0.1%

TOXICITY:

Determined

CORROSION - Copper Standard:

Maximum classification of 100

G. REACTIVITY

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

H. ENVIRONMENTAL INFORMATION

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

Remove all ignition sources, Turn off and eliminate all ignition sources. Keep people away. Minimize breathing contact. Ventilate confined spaces. Open all windows and doors. Refer to MSDS for explosion hazards.

The very high volatility of this material will cause extremely rapid evaporation. Appropriate action is needed or should be attempted.

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

THRESHOLD PLANNING QUANTITY (TPQ), EPA REGULATION 40 CFR 300.610:

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

TOXIC CHEMICAL RELEASE REPORTING, EPA REGULATION 40 CFR 302.610:

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

HAZARDOUS CHEMICAL REPORTING, EPA REGULATION 40 CFR 370.610:

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 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.

ADDITIONAL 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.*

To minimize fire or explosion risk from static charge accumulation and discharge, effectively ground conductive transfer system in accordance with the National Fire Protection Association standard for Petroleum Products.

Due to 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 Electrical Code (NFPA-70). This document is available from the National Fire Protection Association, Batterymarch, 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.

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

DANGER!

EXTREMELY FLAMMABLE

ASPHYXIAN

MATERIAL REDUCES OXYGEN AVAILABLE FOR BREATH
PROLONGED CONTACT MY CAUSE FROSTBITE

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

The information and recommendations contained herein are, to the best of Chemweld belief, accurate and reliable as of the date issued. Chemweld does not warrant or guarantee or reliability, and Chemweld shall not be liable for any loss or damage arising out of

The information and recommendations are offered for the users's considerations and is the user's responsibility to satisfy itself that they are suitable and complete for its buyer repackages this product, legal council should be consulted to insure proper he necessary information is included on the container.

The Environmental Information included under Section H hereof as well as the Hazard Identification system (HMIS) and National Fire Protection Association (NFPA) ratings by Chemweld, Inc. in order to provide additional health and hazard classification in