MATERIAL SAFETY DATA SHEET

EFFECTIVE JANUARY 2009

Llame 1-888-223-0029 para la informaacion de la seguridad en el expanol

Suburban Propane, L.P. P.O. Box 206 Whippany, NJ 07981-0206

TRANSPORTATION EMERGENCY RESPONSE : CHEMTREC (800) 424-9300	GENERAL ADDITIONAL INFORMATION: SAFETY SERVICES (973) 887-5300

SECTION 1 –PRODUCT IDENTIFICATION

Product Name: Commercial Odorized Propane
Chemical Name: Propane
Chemical Family: Petroleum Hydrocarbon
Common Names: Liquefied Petroleum Gas, LP-Gas, LPG, Bottle Gas

SECTION 2 – PHYSICAL AND CHEMICAL CHARACTERISTICS

BOILING POINT: - 44° F	FLASH POINT: -156° F	BULK DENSITY: 4.20 lbs. /gal.
SPECIFIC GRAVITY:	LIQUID: 0.504	VAPOR: 1.50
GAS VOLUME @ ATM. PRESSURE & 60° F (Cu. Ft. gas/gal. Liquid): 36.38		
VAPOR PRESSURE: 208 psig @ 100° F (ASTM) SPECIFIC HEAT of LIQUID: .630 BTU/LB. & 60° F FLAMMABILITY LIMITS (% BY VOLUME IN AIR): L.E.L.: 2.1 U.E.L.: 9.5		
EXPANSION RATIO OF LIQUID TO GAS @ 14.7psia : 1 to 270		
LIQUID BOIL-OFF TO PROPANE VAPOR ABOVE – 44 F°: 100%		

COMPONENTS	***CAS NO.***	
PROPANE	74-98-6	*
PROPYLENE	115-07-1	*
BUTANES	106-97-8	2.5%
SULPHUR	7704-34-9	185 ppmw with no discoloration of Lead Acetate paper**
RESIDUAL MATTER		0.05 ml after boil off of 100 ml liquid sample **
ODORANT(S)	Various	Odor concentration detectable in air of not over one-fifth of the lower limit of flammability per NFPA 58.
CORROSIVES		Not to exceed #1 grade copper strip test**

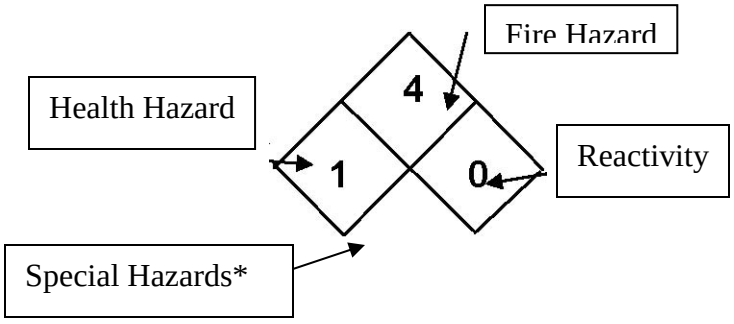
PROPANE IS COLORLESS AND ODORLESS.
PROPANE IS VERY STABLE.
POLYMERIZATION WILL NOT OCCUR.
AN ADDED ODORANT GIVES PROPANE A STRONG UNPLEASANT SMELL. Information regarding the effectiveness or intensity of odorants, is set forth in Section 9 below.

***** *Combined constituents comprise a minimum 97.45 % of the total weight under Gas Processors Association (GPA) Standard 2140-97.*
*** Based on American Society of Testing and Materials (ASTM) Standard D1835-91.*

SECTION 3 –PHYSICAL HAZARD DATA

NFPA CLASSES:

4 - Severe
3 – Serious
2 – Moderate
1 – Slight
0 – Minimal
*Ref. NFPA 704



PROPANE IS FLAMMABLE. PROPANE IS A SIMPLE ASPHYXIANT.
Flammable Gas under pressure – Keep away from sources of ignition such as heat, sparks or flame. Vapor is heavier than air and may collect in low-lying areas.

WHAT IS PROPANE?

Propane (also called LPG-Liquefied Petroleum Gas or LP-Gas) is a liquid fuel stored under pressure. In most systems, propane is vaporized to a gas before it leaves the tank. Propane is highly flammable when mixed with air (oxygen) and can be ignited by many sources, including open flames, smoking materials, electrical sparks, and static electricity. Severe "freeze burn" or frostbite can result if propane liquid comes in contact with your skin.

SECTION 4 – HEALTH HAZARD DATA

Propane is a simple asphyxiant and care must be taken to provide adequate ventilation. Vapors can displace available oxygen for breathing in confined spaces. Odor may not provide adequate warning of potentially hazardous concentrations. Propane is heavier than air and may collect in low-lying areas in the absence of wind or ventilation. Liquid propane can cause freeze burns when brought into direct contact with body parts.

SECTION 5 – PRIMARY ROUTES OF ENTRY

Eye: Although propane vapor is generally non-irritating, pressurized gas may inflict mechanical injury to the eye. Direct contact with liquid propane can cause freeze burns and resultant swelling of the eye.
Skin: Contact with liquid propane can cause freeze burns similar to frostbite.
Ingestion: Deemed unlikely.
Inhalation: Simple asphyxiant. Extreme over exposure may cause dizziness, headache, disorientation, excitability, fatigue, coughing, vomiting, anesthesia, unconsciousness and death.

SECTION 6 – EXPOSURE LIMITS

COMPONENT	THRESHOLD LIMIT VALUE (TLV)	PERMISSABLE EXPOSURE LIMIT (PEL)
PROPANE	NE	1000 ppm
PROPYLENE	NE	NE
BUTANES	NE	800 ppm

PROPANE CAN DISPLACE OXYGEN REQUIRED FOR NORMAL RESPIRATION AND CARE SHOULD BE TAKEN TO PROVIDE ADEQUATE VENTILATION, ESPECIALLY IN CONFINED SPACES AND IN THE ABSENCE OF WIND.

SECTION 7 – TOXICOLOGICAL INFORMATION

Propane is not listed in the latest edition of the National Toxicology Program Annual Report on Carcinogens, has not been found to be a potential carcinogen in the latest edition of the International Agency for Research on Cancer Monographs, and has not been identified as a carcinogen by OSHA.

Upon review of USC Title 15 Chapter 23 Section 2601 commonly known as Toxic Substance Control Act (TSCA), Propane has not been found to be a chemical whose manufacture, processing, distribution in commerce, use, or disposal to present an unreasonable risk of injury to health or the environment.

Propane does not contain any Class 1 or Class 2 ozone-depleting chemicals. Propane is not a listed marine pollutant.

The Food and Drug Administration (FDA) has said propane is GRAS (generally recognized as safe) as a direct human food ingredient when used as a propellant, aerating agent and gas.

Normal combustion products of propane are carbon dioxide, nitrogen and water vapor. Incomplete combustion of propane can produce carbon monoxide (CO), a toxic gas, and various aldehydes; an eye and nose irritant. These can be produced both by gas appliances and internal combustion engines.

SECTION 8 – SAFE HANDLING AND USE

Propane systems must be tested and proven leak free prior to use. Refer to National Fire Protection Association (NFPA) 54 National Fuel Gas Code for further instructions.

Keep away from all sources of ignition, including heat, sparks and open flames. Never check for leaks with a lit match or flame. Use an approved leak detector solution or electronic leak detector.

All piping and equipment used for the handling, storage and use of propane must be specifically designed for that purpose. Refer to NFPA 54 National Fuel Gas Code and NFPA 58 Liquefied Petroleum Gas Code.

OSHA 29 CFR 1910.110, DOT 49 CFR 172.700 and NFPA 58 all require that persons handling LP gases be specially trained in proper handling and operating procedures, which must be documented by the employer. Only qualified persons should transport, operate, service and/or install propane systems and containers.

Propane vapor is heavier than air and can collect in low-lying areas, especially in the absence of wind or ventilation. Propane is a simple asphyxiant.

Liquid propane can cause freeze burns, and appropriate personal protective equipment should be used whenever handling this product.

Propane cylinders should always be stored in an approved location with relief valves in direct communication with the vapor space, and with service valves closed and plugged when not in use. Refer to NFPA 58 for details of specific storage requirements.

Empty propane containers retain residue and should be treated as if full. Never drop or damage containers. Damaged or corroded and leaking containers should not be utilized. Contact your local Suburban Propane supplier immediately to report any problems. If container service valve fails to operate properly, discontinue use. Never insert any object into the pressure relief valve. Return unused propane to supplier for proper disposal.

SECTION 9 – EXPOSURE CONTROLS

Propane is Odorized: Propane smells like rotten eggs, a skunk's spray, or a dead animal. Some people may have difficulty smelling propane due to their age (older people have a less sensitive sense of smell); a medical condition; or the effects of medication, alcohol, tobacco, or drugs. Consider purchasing a propane gas detector as an additional measure of security.

Odor Fade: Odor fade is an unintended reduction in the concentration of the odor of propane, making it more difficult to smell. Although rare, several situations can cause odor fade:

- The presence of air, water, or rust in a propane tank or cylinder
- The passage of leaking propane through soil
- The exposure to building materials, masonry or fabrics

Since there is a possibility of odor fade or problems with your sense of smell, you should respond immediately to even a faint odor of gas.

To learn what propane smells like, Customers unfamiliar with that smell should call Suburban's Safety Information Request Center at 1-888-223-0029 and order the pamphlets called "Important Propane Safety Information for You and Your Family" and/or an expansive "Propane Safety" booklet to obtain a Scratch and Sniff Test, free of charge. Pamphlets can also be purchased through Propane Education & Research Council (PERC) at 1-866-905-1075 or www.propanecatalog.com.

Propane Gas Detectors: Propane gas detectors sound an alarm if they sense propane in the air. They can provide an additional measure of security in homes with little-used areas or with occupants who have difficulty smelling propane.

Guidelines regarding propane gas detectors:

- Buy only units that are listed by Underwriters Laboratories (UL).
- Follow the manufacturer's instructions regarding installation and maintenance.
- Never ignore the smell of propane, even if no detector is sounding an alarm.

Engineering Controls: Provide ventilation in enclosed areas where accumulation of vapors may provide a flammable mixture. Where flammable mixtures may be present, specially designed electrical systems must be used in accordance with NFPA 70 National Electric Code.

Respiratory Protection: For general use no protection is required. Under emergency conditions, concentrations may be high enough to warrant supplied-air or self-contained breathing apparatus. Under these conditions, a flammable atmosphere is likely and precautions should be taken to avoid ignition.

Eye Protection: Approved safety glasses should be used whenever filling and handling propane containers.

Protective Clothing: To avoid skin contact with liquid propane, approved gloves that are impervious to propane should be worn along with clothing that will provide protection from liquid propane for the expected duration- of exposure.

Other Protective Equipment: Safety shoes are recommended when handling cylinders.

SECTION 10 – EMERGENCY AND FIRST AID PROCEDURES

Contact with liquid propane can cause freeze burns similar to frostbite. Remove saturated clothing, shoes and jewelry immediately. Affected body parts should be gently flushed with or immersed in lukewarm water for 15 minutes. Seek medical attention.

If respiratory symptoms occur, get victim away from source and into fresh air. If breathing difficulties develop, qualified personnel may administer oxygen. If breathing or heartbeat cease, artificial respiration or cardiopulmonary resuscitation should be started immediately. Contact emergency medical responders at once.

IF YOU SMELL, HEAR OR SEE GAS

1. **NO FLAMES OR SPARKS**! Immediately put out all smoking materials and other open flames. Do not operate lights, appliances, telephones, or cell phones. Flames or sparks from these sources can trigger an explosion or fire.
2. **LEAVE THE AREA IMMEDIATELY**! Get everyone out of the building or area where you suspect gas is leaking.
3. **SHUT OFF THE GAS**. Turn off the main gas supply valve on your propane tank if it is safe to do so. To close the valve, turn it to the right (clockwise).
4. **REPORT THE LEAK**. From a neighbor's home or other nearby building away from the gas leak, call your propane retailer right away. If you can't reach your propane retailer, call 911 or your local fire department.
5. **DO NOT RETURN TO THE BUILDING OR AREA** until your propane retailer determines that it is safe to do so.
6. **GET YOUR SYSTEM CHECKED**. Before you attempt to use any of your propane appliances, your propane retailer or a qualified service technician must check your entire system to ensure it is leak-free.

LIGHTING PILOT LIGHTS

IF A PILOT LIGHT REPEATEDLY GOES OUT or is very difficult to light, there may be a safety problem. DO NOT try to fix the problem yourself. It is strongly recommended that only a QUALIFIED SERVICE TECHNICIAN light any pilot light that has gone out.

YOU ARE TAKING THE RISK of starting a fire or an explosion if you light a pilot light yourself. Carefully follow all of the manufacturer's instructions and warnings concerning the appliance before attempting to light the pilot.

APPLIANCE MAINTENANCE

LEAVE IT TO THE EXPERTS. Only a qualified service technician has the training to install, inspect, service, maintain, and repair your appliances. Have your appliances and propane system inspected just before the start of each heating season.

HELP YOUR APPLIANCES "BREATHE" Check the vents of your appliances to be sure that flue gases can flow easily to the outdoors; clear away any insect or bird nests or other debris. Also, clear the area around your appliances so plenty of air can reach the burner for proper combustion.

DO NOT TRY TO MODIFY OR REPAIR valves, regulators, connectors, controls, or other appliance and cylinder/tank parts. Doing so creates the risk of a gas leak that can result in property damage, serious injury, or death.

HAVE OLDER APPLIANCE CONNECTORS INSPECTED. Certain older appliance connectors may crack or break, causing a gas leak. If you have an appliance that is more than 20 years old, have a qualified service technician inspect the connector. Do not do this yourself, as movement of the appliance might damage the connector and cause a leak.

FLAMMABLE VAPORS ARE A SAFETY HAZARD. The pilot light on your propane appliance can ignite vapors from gasoline, paint thinners, and other flammable liquids.

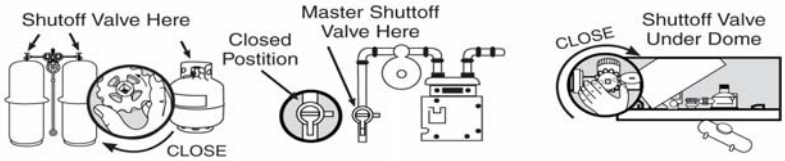
Be sure to store flammable liquids outdoors or in an area of the building containing no propane appliances.

DON'T RISK IT! If you cannot operate any part of your propane system, or if you think an appliance or other device is not working right, call your propane retailer or qualified service technician for assistance.

RUNNING OUT OF GAS
DON'T RUN OUT OF GAS. SERIOUS SAFETY HAZARDS, INCLUDING FIRE OR EXPLOSION, CAN RESULT.

- If an appliance valve or gas line is left open, a leak could occur when the system is recharged with propane.
- If your propane tank runs out of gas, any pilot lights on your appliances will go out. This can be extremely dangerous.
- A LEAK CHECK IS REQUIRED. In many states, a propane retailer or a qualified service technician must perform a leak check of your system before turning on the gas.

EQUIPMENT AWARENESS
KNOW HOW TO SHUT OFF YOUR GAS SUPPLY. Know where the gas supply shutoff valve to your premises valve is located. Tank and cylinder valves must be turned to the right (in a clockwise direction) to stop the flow of gas.



MANUFACTURER'S INSTRUCTIONS. All new appliances will come with an owner's manual and manufacturer's instructions. Keep and consult them for correct operating and maintenance procedures. Contact the appliance manufacturer for replacement instructions, if needed.

KNOW WHERE UNDERGROUND GAS LINES AND TANKS ARE LOCATED to avoid damaging them when digging or working on your premises.

DO NOT STORE PROPANE CYLINDERS OR CONTAINERS INSIDE BUILDINGS. Customer to make sure regulator remains protected so operation will not be affected by the elements (rain, sleet, snow, ice, mud, debris). Regulator vent should be pointed down and be checked regularly. Customer to make sure building openings are not created and sources of ignition are not installed within the area of propane tanks, regulators, meters or propane equipment.

BE PREPARED FOR WEATHER-RELATED EMERGENCIES

FLOODING – If a flood is predicted for your area or your gas-fired appliance(s) or equipment has been submerged due to flooding:

- Turn off the gas valve at the container or cylinder.
- DO NOT turn the gas back on until a qualified service technician has checked the system.

HEAVY SNOW OR ICE – Heavy accumulations of snow, ice or icicles falling from roof eaves on regulators, piping, tubing and valves may cause damage that could result in a gas leak. Regulator vents must remain clear of snow and ice to operate properly. Check the regulator vents on the propane system to be sure they are free of condensation, which if frozen, could cause a malfunction. If a regulator vent is clogged with ice or snow, contact Suburban Propane immediately. Appliance vents, chimneys and flues must be kept clear of snow and ice so appliances may vent properly, especially on roofs of mobile homes. Customer shall arrange for protection of regulators from the elements and, where applicable, for protection of piping, regulators, meters, etc. from the forces of accumulated snow/ice/icicles with a protective structure (contact your local building or fire official for guidance). When removing snow:

- Use care around tanks, piping, tubing, valves, regulators and other equipment to prevent damage
- Use a broom instead of a shovel.
- Do not shovel snow from roofs onto propane equipment. The weight of the snow/ice/icicle could damage propane equipment causing a leak.

SAFE ACCESS
Provide structurally sound access to propane equipment free from snow, ice, debris or other obstructions.

In the event of an accidental release or spill out of doors, these actions should be taken: Evacuate immediate area. Eliminate all possible sources of ignition including heat, sparks and open flame. Provide maximum ventilation and shut off source(s) of leak if possible to do so safely. If cylinder or container is leaking, contact the nearest Suburban Propane supplier or local fire department. Never enter a vapor (white) cloud.

Release without fire: Use a "fogging" hose stream of water to break up and dissipate propane into the atmosphere. Stay uphill and upwind of release at all times.

Release with fire: Apply a direct stream of water to container in order to prevent overheating. Do not attempt to extinguish flame until source of leak is shut off. Water spray or "fog" should be used for adjacent areas and to dissipate liquid propane to atmosphere.

Extinguishing Media: Class B fire-extinguishing media such as Halon, C02, or dry chemical can be used. Water spray or fog is appropriate for surrounding areas. Do not extinguish flame until source of gas is shut off. Only those with specialized training should attempt fire fighting. For further information, refer to NPGA "Propane Emergencies" Text #7220.

SECTION 11 – OTHER INFORMATION

Propane fired equipment may emit carbon monoxide in its flue gasses.

CARBON MONOXIDE AND YOUR SAFETY

WHAT IS CARBON MONOXIDE (CO)? You can't taste or smell CO, but it is a very dangerous gas, produced when any fuel burns. High levels of CO can come from appliances that are not operating correctly, or from a venting system or chimney that becomes blocked.

CO CAN BE DEADLY! High levels of CO can make you dizzy or sick (see below). In extreme cases, CO can cause brain damage or death.

- Headache
- Dizziness
- Fatigue
- Shortness of breath
- Nausea

IF YOU SUSPECT CO IS PRESENT, ACT IMMEDIATELY!

1. If you or a family member shows physical symptoms of CO poisoning, get everyone out of the building and call 911 or your local fire department.
2. If it is safe to do so, open windows to allow entry of fresh air, and turn off any appliances you suspect may be releasing CO.
3. If no one has symptoms, but you suspect that CO is present, call your propane retailer or a qualified service technician to check CO levels and your propane equipment.

TO HELP REDUCE THE RISK OF CO POISONING:

- Have a qualified service technician check your propane system appliances and related venting systems annually, preferably before heating season begins.
- Install UL-listed CO detectors on every level of your home.
- Never use a gas oven or range-top burners to provide space heating.
- Never use portable heaters indoors unless they are designed and approved for indoor use.
- Never use a barbecue grill (propane or charcoal) indoors for cooking or heating.
- Regularly check your appliance exhaust vents for blockage.

SIGNS OF IMPROPER APPLIANCE OPERATION THAT CAN GENERATE HIGH CO LEVELS:

- Sooting, especially on appliances and vents.
- Unfamiliar or burning odor.
- Increased moisture inside of windows.

FURTHER CONSUMER SAFETY INFORMATION

We urge you to visit www.suburbanpropane.com for Consumer Safety Information prepared by the Propane Education & Research Council (PERC). Pamphlets called "Important Propane Safety information for You and Your Family," "Important Propane Safety Information for Users of Small Cylinders" (including cylinder transportation, storage and inspection procedures), an expansive "Propane Safety" booklet, weather/natural disaster information, and Suburban's Material Safety Data Sheet (MSDS) may be read and downloaded online. These documents are also available free of charge by calling Suburban at 1-888-223-0029 and PERC pamphlets containing a Scratch and Sniff Test of propane odor can be purchased at 1-866-905-1075 or www.propanecatalog.com.

SECTION 12 –CONTACT INFORMATION

This Material Safety Data Sheet, issued January 2009, was prepared by Safety Services of Suburban Propane and supercedes September 2008.

For further information write to:
SUBURBAN PROPANE, L.P.
Safety Services
240 Route 10 West
P.O. Box 206
Whippany, NJ 07981-0206
Or call: (973) 887 – 5300