SAFETY DATA SHEET

Material Name: LIQUEFIED PETROLEUM GAS (LPG)

Section 1 – Product and Company Identification	
Product Identifier:	LIQUEFIED PETROLEUM GAS (LPG)
Other means of identification:	LIQUEFIED PETROLEUM GAS (LPG), Propane, Forklift Propane
Product Uses:	Industrial and professional use. Consumer use
Supplier Details:	Western Gasco Cylinders Ltd. 2169 Peardonville Road Abbotsford BC V2T 6J7
Emergency Phone Number:	(613)996-6666

Section 2 – Hazards Identification	
Classification in accordance with paragraph (d) of §1910.1200	Flammable Gases – Category 1 Gases under pressure – liquified gas, simple asphyxiant
Signal word Hazard statement(s) Symbol Precautionary statement	Warning Extremely flammable gas Contains gas under pressure; may explode if heated May displace oxygen and cause rapid suffocation May form explosive mixtures with air  May cause frostbite Do not handle until all safety precautions have been read and understood Keep away from heat, sparks, open flames, hot surfaces.— No smoking Use and store only outdoors or in a well ventilated place Use a backflow preventive device in piping Do not open valve until connected to equipment prepared for use Close valve after each use and when empty Never put cylinders into unventilated areas of passenger
Hazards not otherwise classified	Not applicable

Section 3 – Compositions / Information of Ingredients

SAFETY DATA SHEET

Material Name: LIQUEFIED PETROLEUM GAS (LPG)

Chemical Name & Formula	L.P.G. (liquefied petroleum gas)
Common Name and Synonyms	L.P.G. (liquefied petroleum gas, Propane, forklift propane
CAS Number	68476-85-7
Purity	>99%, by volume.

Section 4 – First Aid Measures	
Inhalation	Remove to fresh air and keep comfortable for breathing. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration. Get medical attention immediately.
Skin Contact	For dermal contact or suspected frostbite, remove contaminated clothing and flush affected areas with lukewarm water. DO NOT USE HOT WATER. A physician should see the patient promptly if contact with the product has resulted in blistering of the dermal surface or in deep tissue freezing
Eye Contact	If frostbite is suspected, flush eyes with cool water for 15 minutes and obtain immediate medical attention.
Ingestion	Not an expected route of exposure, refer to inhalation section above.
Most important symptoms, effects, acute and delayed	High concentrations may cause asphyxia from lack of oxygen or act as a narcotic causing central nervous system depression. May cause nausea, dizziness, headaches, shortness of breath, lethargy, narcosis, unconsciousness and possibly cardiac arrhythmias. Contact with evaporating liquid may cause cold burns/frostbite
Immediate medical attention and special treatment needed	A patient adversely affected by exposure to this product should not be given adrenaline(epinephrine) or similar heart stimulant since these would increase the risk of cardiac arrhythmias.

Section 5 – Fire Fighting Measures	
Suitable extinguishing media	Dry chemical or CO2. Water spray (fog). DO NOT EXTINGUISH A LEAKING GAS FIRE UNLESS LEAK CAN BE STOPPED
Special hazards arising (e.g. nature of any hazardous combustion process)	Extremely flammable gas. May form explosive mixtures with air. Will be easily ignited by heat, sparks or flames. Vapors may travel to source of ignition and flash back. Vapors from liquefied gas are initially heavier than air and spread along ground. Vapors may accumulate in confined areas (basement, tanks, hopper/tank cars, etc.). Cylinders may rupture under extreme heat
Special protective equipment and precautions for firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, NIOSH (approved or equivalent) and full protective gear. As an immediate precautionary measure, isolate spill or leak area for at least 100 meters (330 feet) in all directions..

Section 6 – Accidental Release Measures	
Personal precautions, protective equipment, emergency procedures	ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Evacuate personnel to safe areas. Ensure adequate ventilation, especially in confined areas. Consider the risk of potentially explosive atmospheres. Monitor oxygen level. All equipment used when handling the product must be grounded. Use non-sparking tools and equipment. Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.
Methods and materials for containment and clean up	Gas/vapor is heavier than air. Prevent from entering sewers, basements and work pits, or any place where accumulation may be dangerous.

Section 7 – Handling and Storage	
Precautions for safe handling	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking Ground and bond all lines and equipment associated with product system. All equipment should be non-sparking and explosion proof Separate flammable gas cylinders from oxygen and other oxidizers by a minimum distance of 20 ft. or by a 5 ft. high barrier with a minimum fire resistance rating of a half an hour. "NO SMOKING" signs should be posted in storage and use areas. Never put cylinders into trunks of cars or unventilated areas of passenger vehicles. Never attempt to refill a compressed gas cylinder without the owner's written consent. Never strike an arc on a compressed gas cylinder or make a cylinder a part of an electrical circuit.

Conditions for safe storage, including any incompatibilities	Store in cool, dry, well-ventilated area of non-combustible construction away from heavily trafficked areas and emergency exits. Keep at temperatures below 52°C/ 125°F. Cylinders should be stored upright with valve protection cap in place and firmly secured to prevent falling. Full and empty cylinders should be segregated. Use a "first in-first out" inventory system to prevent full cylinders from being stored for excessive periods of time. Store containers should be periodically checked for general condition and leakage. Outside or detached storage is preferred.

Section 8 – Exposure Controls / Personal Protection	
Appropriate Engineering Controls	Provide general ventilation, local exhaust ventilation, process enclosure or other engineering controls to maintain airborne levels below recommended exposure limits and to maintain oxygen levels above 19.5%. Explosion proof ventilation systems. Oxygen detectors should be used when asphyxiating gases may be released. Consider installation of leak detection systems in areas of use and storage. Systems under pressure should be regularly checked for leakages. Showers. Eyewash stations.
Individual protection measures / personal protective equipment	Eye/face protection- Wear safety glasses with side shields (or goggles). If there is potential for exposure to liquid, wear Goggles face-shield over either safety glasses with side shields or safety goggles Skin and body protection - Work gloves and safety shoes are recommended when handling cylinders. Wear loose fitting, cold insulating gloves and suitable clothing to prevent skin contact with liquid, cold gas and cold equipment or piping. Wear fire/flame resistant/retardant clothing. Take precautionary measures against static discharge. Respiratory protection- If exposure limits are exceeded or irritation is experienced, NIOSH approved respiratory protection should be worn. Positive pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Section 9 – Physical and Chemical Properties			
Property	**Value**	**Property**	**Value**
Appearance	Colorless	Upper/Lower Explosive Limit	9.5%
Odor	Boiling cabbage	Vapor Pressure	600 - 39000 hPa @ 20 °C
Odor Threshold	4800 ppm* (ethyl mercaptan)	Vapor Density	1.52
		Relative Density to Air (=1)	1.52
pH	NA		
Melting / Freezing Point	188 °C / -306.4 °F	Partition Coefficient: noctanol / water	Slightly soluble 6.1% @ 17.8°C
Boiling Point	-42 °C / -44 °F	Auto Ignition Temperature	432 °C / 810 °F
Flash Point	-103 °C / -154 °F	Decomposition Temperature	NA
Evaporation Rate	NA	Viscosity (dynamic)	Not applicable
Flammability	flammable gas		

Section 10 – Stability and Reactivity	
Reactivity	Not reactive under normal conditions
Chemical Stability	Stable under normal conditions.
Possibility of Hazardous Reactions	May form explosive mixtures with air
Incompatible Materials	Acids. Oxidizing agents. Halogenated compounds.
Hazardous Decomposition Products	Carbon monoxide. Carbon dioxide (CO2).

Section 12 – Ecological Information	
Ecotoxicity	No known acute aquatic toxicity.
Persistence and degradability	No information available.
Bio-accumulative potential	No information available
Mobility in Soil	No information available
Other Adverse effects	No known other effects
Section 11 Toxicology Information	
Information on likely routes of exposure	Inhalation – High concentrations of aliphatic hydrocarbon gases may cause CNS depression. Recent information suggest that C1-C4 aliphatic (alkane) hydrocarbon gases can cause potentially fatal cardiac arrhythmias. Cardiac sensitization to adrenalin in dogs has been noted following inhalation. In dogs, the heart is more sensitive to epinephrine induced ventricular fibrillation following exposure to 15-90% propane for 10 minutes. Ventricular fibrillation have been reported in humans following inhalation of n-butane Ingestion – not an expected route Skin – Contact with evaporating liquid may cause cold burns/frostbite Eye – Contact with evaporating liquid may cause cold burns/frostbite
Symptoms related to physical, chemical, toxicological characteristics	High concentrations may cause asphyxia from lack of oxygen or act as a narcotic causing central nervous system depression. Symptoms of overexposure are dizziness, headache, tiredness, nausea, vomiting, unconsciousness, cessation of breathing
Delayed, Immediate, chronic effects from short and long term exposure	As a simple asphyxiant, the immediate effects of high concentrations causing oxygen deficiency in air include dizziness, drowsiness, nausea, unconsciousness, and death.
Numerical measures of toxicity	LD50 – not available LC50 – not available
Carcinogen Listing	Not carcinogenic

Section 13 – Disposal Considerations	
Waste residues and disposal guidelines	Do not attempt to dispose of residual waste or unused quantities. Return in the shipping container PROPERLY LABELED WITH ANY VALVE OUTLET PLUGS ORCAPSSECURED AND VALVE PROTECTION CAP IN PLACE

Section 14 – Transport Information	
US DOT UN ID Number	UN1075

SAFETY DATA SHEET

Material Name: LIQUEFIED PETROLEUM GAS (LPG)

UN Proper Shipping Name	Petroleum gases, liquefied
DOT Transportation Hazard Class	DOT Class 2.1 (Flammable compressed gas) 
Packing Group	Not Applicable
Environmental Hazards	None
Special Precautions	Avoid transport on vehicles where the load space is not separated from the driver's compartment. Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency. Before transporting product containers: - Ensure there is adequate ventilation. - Ensure that containers are firmly secured. - Ensure valve is closed and not leaking. - Ensure valve outlet cap nut or plug (where provided) is correctly fitted. - Ensure valve protection device (where provided) is correctly fitted.

Section 15 - Regulatory Information
US Federal TSCA 8(a) CDR - exempted US EPA SARA Title III Section 312 hazard Category: Sudden release of pressure hazard US States Right-To-Know Lists: Massachusetts, New Jersey, Pennsylvania

Section 16 – Other Information

NFPA Health hazards 2
Flammability 4
Instability 0
Physical and Chemical Properties – 0

Note: Ratings were assigned in accordance with Compressed Gas Association (CGA) guidelines as published in CGA Pamphlet P-19-2019, CGA Recommended Hazard Ratings for Compressed Gases, 4th Edition.

USE OF THIS INFORMATION:
Western Gasco Cylinders Inc. offers this information to promote the safe use of this product through awareness of hazards and safety information. Those who use or transport or sell this product to others should: 1) Disseminate this information internally to all workplace areas, employees, agents and contractors likely to encounter this product
2) Provide supplemental hazards awareness, safety information, operation and maintenance procedures to the workplace areas and employees, agents and contractors likely to encounter this product
3) Furnish this information to all their customers who purchase this product
4) Ask each purchaser or user of the product to notify its employees and customers of the product hazards and safety information.

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