

Liquefied Petroleum Gas (LPG)

SECTION 1: Identification of the hazardous chemical and of the supplier

PRODUCT IDIENTIFIER

Product Name : Phoenix Super LPG

Chemical Name : Liquefied Petroleum Gas (LPG)

CAS NO. : 68476-85-7

Recommended Use : Fuel for cooking, heating and gas lighting.

Commercial and industrial applications include

- Refrigeration and air conditioning

- Clothes drying

 Metal cutting and soldering Agricultural uses include:
 Heating for poultry

Grain dryingPest control

Alternative vehicle fuel (Autogas) for taxi and forklift

Manufacturer Details

Company : Phoenix LPG Philippines Incorporated
Address : Matab-ang, Dalipuga, Iligan City, Philippines

Emergency Telephone Numbers : Bureau of Fire Protection

160/161

SECTION 2: Hazards Identification

Classification of the hazardous chemical

Flammable gases : Category 1
Gases under pressure : Liquefied gas

Specific target organ toxicity: Category 3 (Central nervous system)

single exposure

Label Elements

Hazard pictograms :







Signal word : Danger

Hazard statements : H220 Extremely flammable gas.

H280 Contains gas under pressure; may explode if heated.

H336 may cause drowsiness or dizziness.

Precautionary statements : **Prevention:**

P210 Keep away from heat/sparks/open flames/hot surfaces.

No smoking.

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

P271 Use only outdoors or in a well-ventilated area.

Response:

P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell. P377 Leaking gas fire: Do not extinguish, unless leak can be

stopped safely.

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P381 Eliminate all ignition sources if safe to do so.

Storage:

P403 + P233 + P410 Store in a well-ventilated place. Keep

container tightly closed. Protect from sunlight.

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste

disposal plant.

Other hazards which do not result in classification

No information available.

SECTION 3: Composition and information of the ingredients of the hazardous chemical

Substance / Mixture : UVCB

Hazardous components

Chemical Name	CAS-No.	Concentration (%)
Butane	106-97-8	>= 70 - < 90
Propane	74-98-6	>= 30 - < 50
Ethane	74-84-0	>= 5 - < 10

SECTION 4: First aid measures

If inhaled : If unconscious, place in recovery position

and seek medical advice.

If symptoms persist, call a medical doctor.

Move to fresh air.

Consult a medical doctor after significant exposure.

In case of eye contact : Flush eyes with water as a precaution.

Remove contact lenses. Protect unharmed eye.

Keep eye wide open while rinsing.

If eve irritation persists, consult a specialist,

If swallowed : Keep respiratory tract clear.

Do NOT give milk or alcoholic beverages.

Never give anything by mouth to an unconscious person.

If symptoms persist, call a medical doctor.

General advice : Move out of dangerous area.

Show this safety data sheet to the doctor in attendance. Do

not leave the victim unattended.

Most important symptoms and effects, both acute and

delayed

: Simple asphyxiant and may cause dizziness and drowsiness.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media : Alcohol-resistant foam

Dry chemical

Carbon dioxide (CO2)

Unsuitable extinguishing media : High volume water jet

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Special protective equipment and precautions for fire-fighters

Special protective equipment

for firefighters

Specific extinguishing methods

: Wear self-contained breathing apparatus for firefighting if

necessary

: For safety reasons in case of fire, cans should be stored

separately in closed containments.

Use a water spray to cool fully closed containers.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures : Remove all sources of ignition. Evacuate

personnel to safe areas.

Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Ensure adequate ventilation.

Environmental precautions : Prevent further leakage or spillage if safe to do so.

Prevent product from entering drains.

If the product contaminates rivers and lakes or drains inform

respective authorities.

SECTION 7: Handling and storage

Handling

Advice on protection against

Fire and explosion

: Normal measures for preventive fire protection.

Do not spray on a naked flame or any incandescent material. Keep away from open flames, hot surfaces and sources of

ignition.

Take necessary action to avoid static electricity discharge

(which might cause ignition of organic vapours).

Use only explosion-proof equipment.

Advice on safe handling : Take precautionary measures against static discharges.

Do not breathe vapors/ dust.

Avoid exposure - obtain special instructions before

use. For personal protection see section 8.

Smoking, eating and drinking should be prohibited in the

application area.

Provide sufficient air exchange and/or exhaust in work rooms. Open drum carefully as content may be under pressure. Dispose of rinse water in accordance with local and national

regulations.

Storage

Conditions for safe storage

: Prevent unauthorized access.

Keep container tightly closed in a dry and well-ventilated

place.

Observe label precautions.

Electrical installations / working materials must comply with

the technological safety standards.

No smoking.





SECTION 8: Exposure controls and personal protection

Control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Butane	106-97-8	TWA	800 ppm 1,900 mg/m3	MY PEL
		STEL	1,000 ppm	ACGIH
Further information: Central Nervous System impairment				
Propane	74-98-6	TWA	2,500 ppm	MY PEL
Further information: See Appendix F: Minimal Oxygen Content, Asphyxia				

Individual protection measures, such as personal protective equipment

Eye/face protection : Eye wash bottle with pure water.

Tightly fitting safety goggles.

Skin protection : Impervious clothing.

Choose body protection according to the amount and

concentration of the dangerous substance at the work place.

Hand protection : The suitability for a specific workplace should be discussed with

remarks the producers of the protective gloves.

SECTION 9: Physical and chemical properties

Appearance	Liquefied gas
Color	Colorless
Odor	Mercaptan like
Odor Threshold	No data available
рН	No data available
Melting point/freezing point	No data available
Initial boiling point and boiling range	No data available
Flash point	-60 °C
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper explosion limit	15 %(V)
Lower explosion limit	5 %(V)
Vapor pressure	3,800 - 8,300 hPa (37.8 °C)
Relative vapour density	No data available
Relative density	0.55
Density	0.550 g/cm3 (15 °C)
SOLUBILITY (IES)	
Water solubility	No data available
Solubility in other solvents	No data available
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity, dynamic	No data available
Viscosity, kinematic	No data available
-	





SECTION 10: Stability and reactivity

Reactivity : Hazardous polymerization does not occur.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : No dangerous reaction known under conditions of normal use.

Conditions to avoid : Heat, sparks, flame and build-up of static electricity

Incompatible materials : Strong oxidizing agents

Hazardous decomposition products : Fumes, smoke, carbon monoxide

SECTION 11: Toxicological information

Acute Toxicity

COMPONENTS		
Butane		
Acute oral toxicity	Remarks: No data available	
A cuto inhalation toxicity	LC50 (Rat): 277374 ppm	
Acute inhalation toxicity	Exposure time: 4 h	
Acute dermal toxicity	Remarks: No data available	
Propane		
Acute oral toxicity	Remarks: No data available	
Acute inhalation toxicity	LC50 (Rat): > 20 mg/l	
Acute dermal toxicity	Remarks: No data available	
Ethane		
Acute oral toxicity	Remarks: No data available	
Acute inhalation toxicity	Remarks: No data available	
Acute dermal toxicity	Remarks: No data available	

Skin corrosion/irritation

COMPONENTS		
Butane	Remarks: No data available	
Propane	Remarks: No data available	
Ethane	Remarks: No data available	

Serious eye damage/eye irritation

COMPONENTS		
Butane	Remarks: No data available	
Propane	Remarks: No data available	
Ethane	Remarks: No data available	

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Respiratory or skin sensitization

COMPONENTS		
Butane	Exposure Routes: Inhalation Remarks: No data available	
	Exposure Routes: Skin Contact Remarks: No data available	
Propane	Exposure Routes: Inhalation Remarks: No data available	
	Exposure Routes: Skin Contact Remarks: No data available	
Ethane	Exposure Routes: Inhalation Remarks: No data available	
	Exposure Routes: Skin Contact Remarks: No data available	

Germ cell mutagenicity

COMPONENTS		
Butane		
Germ cell mutagenicity - Assessment	In vivo tests did not show mutagenic effects	
Propane		
Germ cell mutagenicity - Assessment	In vivo tests did not show mutagenic effects	
Ethane		
Germ cell mutagenicity - Assessment	No data available	

Carcinogenicity

COMPONENTS		
Butane		
Carcinogenicity - Assessment	No data available	
Propane		
Carcinogenicity - Assessment	No data available	
Ethane		
Carcinogenicity - Assessment	No data available	

Reproductive toxicity

COMPONENTS		
Butane		
Reproductive toxicity - Assessment	No data available	
Propane		
Reproductive toxicity - Assessment	No data available	
Ethane		
Reproductive toxicity - Assessment	No data available	





STOT - single exposure

	COMPONENTS
Butane	
Assessment	May cause drowsiness or dizziness.
Propane	
Assessment	May cause drowsiness or dizziness.
Ethane	
Assessment	No data available

STOT - repeated exposure

COMPONENTS		
Butane	Remarks: No data available	
Propane	Remarks: No data available	
Ethane	Remarks: No data available	

Aspiration toxicity

COMPONENTS		
Butane		
Statement on Aspiration Tox.	No data available	
Propane		
Statement on Aspiration Tox.	No data available	
Ethane		
Statement on Aspiration Tox.	No data available	

Further information

Product

Remarks : Symptoms of overexposure may be headache, dizziness,

tiredness, nausea and vomiting

SECTION 12: Ecological information

Ecotoxicity

Product		
Toxicity to fish	LC50 (Fish): 49.9 mg/l Exposure time: 96 h	
Toxicity to daphnia and other aquatic invertebrates	LC50 (Daphnia magna (Water flea)): 14.22 mg/l Exposure time: 48 h	
Toxicity to algae	EC50 (Algae): 7.71 mg/l Exposure time: 96 h	
Toxicity to fish (Chronic toxicity)	Remarks: No data available	
Toxicity to microorganisms	Remarks: No data available	
Further Information		
The following percentage of the mixture consists of ingredient(s) with unknown hazards to the aquatic environment: 80 %		
COMPONENTS		



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Butane	
Toxicity to fish	LC50 (Fish): 27.98 mg/l
•	Exposure time: 96 h
Toxicity to daphnia and other aquatic	LC50 (Daphnia (water flea)): 69.43 mg/l
invertebrates	Exposure time: 48 h
Toxicity to algae	EC50 (Algae): 16.47 mg/l
TOXICITY to algae	Exposure time: 96 h
Toxicity to fish (Chronic toxicity)	Remarks: No data available
Toxicity to daphnia and other	Remarks: No data available
aquatic invertebrates (Chronic toxicity)	Remarks: No data available
Toxicity to microorganisms	Remarks. No data available
Propane	1.050 (5: 1) 40.0
Toxicity to fish	LC50 (Fish): 49.9 mg/l
•	Exposure time: 96 h
Toxicity to daphnia and other aquatic	LC50 (Daphnia (water flea)): 14.22 mg/l
invertebrates	Exposure time: 48 h
Toxicity to algae	EC50 (Green Algae): 7.71 mg/l
, ,	Exposure time: 96 h
Toxicity to fish (Chronic toxicity)	Remarks: No data available
Toxicity to daphnia and other	Remarks: No data available
aquatic invertebrates (Chronic toxicity)	
Toxicity to microorganisms	Remarks: No data available
Ethane	
Toxicity to fish	LC50 (Fish): 91.42 mg/l
•	Exposure time: 96 h
Toxicity to daphnia and other aquatic	LC50 (Daphnia (water flea)): 16.33 mg/l
invertebrates	Exposure time: 48 h
Toxicity to algae	EC50 (Green Algae): 8.57 mg/l
	Exposure time: 96 h
Toxicity to fish (Chronic toxicity)	Remarks: No data available
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	Remarks: No data available
Toxicity to microorganisms	Remarks: No data available

Persistence and Degradability

COMPONENTS		
Butane		
Biodegradability	Remarks: No data available	
Propane		
Biodegradability	Result: Readily biodegradable	
Ethane		
Biodegradability	Result: Readily biodegradable	





Bioaccumulative Potential

COMPONENTS	
Butane	
Bioaccumulation	Bioconcentration factor (BCF): 33
Partition coefficient: n- octanol/water	Pow: 2.89
Propane	
Bioaccumulation	Remarks: No data available
Partition coefficient: n- octanol/water	Pow: 0.83
Ethane	
Bioaccumulation	Bioconcentration factor (BCF): 13
Partition coefficient: n- octanol/water	Pow: 2.36

Mobility in Soil

Product	
Mobility	Remarks: No data available
COMPONENTS	
Butane	
Mobility	Medium: Soil
	Remarks: Moderate to low mobility.
Propane	
Mobility	Medium: Soil
	Remarks: Moderate to low mobility.
Ethane	
Mobility	Medium: Soil
	Remarks: Moderate to low mobility.

Other adverse effects

Product	
Additional ecological information	No data available
СОМРО	DNENTS
Butane	
Additional ecological information	No data available
Propane	
Additional ecological information	No data available
Ethane	
Additional ecological information	No data available

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SECTION 13: Disposal information

Disposal Methods

Waste from residues : Do not dispose of waste into sewer.

Do not contaminate ponds, waterways or ditches with

chemical or used container.

Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.

Dispose of as unused product. Do not re-use empty containers.

Do not burn, or use a cutting torch on the empty drum.

SECTION 14: Transport information

International Regulation

UNRTDG	
UN number	UN 1075
Proper shipping name	PETROLEUM GASES, LIQUEFIED
Class	2.1
Packing group	Not assigned by regulation
Labels	2.1
IATA-DGR	
UN/ID No.	UN 1075
Proper shipping name	Petroleum gases, liquefied
Class	2.1
Packing group	Not assigned by regulation
Packing instruction (cargo aircraft)	200
Packing instruction (passenger aircraft)	Not permitted for transport
IMDG-Code	
UN number	UN 1075
Proper shipping name	PETROLEUM GASES, LIQUEFIED
Class	2.1
Packing group	Not assigned by regulation
Labels	2.1
EmS Code	F-D, S-U
Marine pollutant	no
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	
Not applicable for product as supplied.	
Hazchem Code	2YE

SECTION 15: Regulatory information

Safety, health, and environmental regulations specific for the hazardous chemical

- 1. Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013.
- 2. Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations 2000.

The components of this product are reported in the following inventories:



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CH INV	On the inventory, or in compliance with the inventory.
TSCA	On TSCA Inventory.
DSL	All components of this product are on the Canadian DSL
AICS	On the inventory, or in compliance with the inventory.
NZIoC	On the inventory, or in compliance with the inventory.
ENCS	On the inventory, or in compliance with the inventory.
ISHL	On the inventory, or in compliance with the inventory.
KECI	On the inventory, or in compliance with the inventory.
PICCS	On the inventory, or in compliance with the inventory.
IECSC	On the inventory, or in compliance with the inventory.

SECTION 16: Other Information

SDS preparation date : 11.23.2017

Revision date

Sources of key data used to : CONCAWE - The oil companies' European association for compile the Safety Data Sheet : Environment, Health and Safety in refining and distribution

ECHA - European Chemicals Agency

GESTIS database on hazardous substances - DGUV

Full text of other abbreviations

(Q)SAR	(Quantitative) Structure Activity Relationship
ÀŃTT	National Agency for Transport by Land of Brazil
ASTM	American Society for the Testing of Materials
bw	Body weight
CPR	Controlled Products Regulations
CCHC	Chemicals Classification and Hazard Communication
DIN	Standard of the German Institute for Standardization
ECx	Concentration associated with x% response
ELx	Loading rate associated with x% response
EmS	Emergency Schedule
ErCx	Concentration associated with x% growth rate response
ERG	Emergency Response Guide
GHS	Globally Harmonized System
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IBC	International Code for the Construction and Equipment of Ships carrying
	Dangerous Chemicals in Bulk
IC50	Half maximal inhibitory concentration
ICAO	International Civil Aviation Organization
ICOP	Industry Code of Practice on Chemicals Classification and Hazard Communication
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
ISO	International Organization for Standardization
LC50	Lethal Concentration to 50 % of a test population
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
MARPOL	International Convention for the Prevention of Pollution from Ships
n.o.s.	Not Otherwise Specified
Nch	Chilean Norm
NITE	National Institute of Technology and Evaluation



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NO(A)EC	No Observed (Adverse) Effect Concentration
NO(A)EL	No Observed (Adverse) Effect Level
NOELR	No Observable Effect Loading Rate
NOM	Official Mexican Norm
NTP	National Toxicology Program
OECD	Organization for Economic Co-operation and Development
OPPTS PBT	Office of Chemical Safety and Pollution Prevention
REACH	Persistent, Bioaccumulative and Toxic substance Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorization and Restriction of Chemicals
SADT	Self-Accelerating Decomposition Temperature
SDS	Safety Data Sheet
TDG	Transportation of Dangerous Goods
UN	United Nations
UNRTDG	United Nations Recommendations on the Transport of Dangerous Goods
vPvB	Very Persistent and Very Bioaccumulative
WHMIS	Workplace Hazardous Materials Information System
DSL	Domestic Substances List (Canada)
KECI	Korea Existing Chemicals Inventory
TSCA	Toxic Substances Control Act (United States)
AICS	Australian Inventory of Chemical Substances
IECSC	Inventory of Existing Chemical Substances in China
ENCS	Existing and New Chemical Substances (Japan)
ISHL	Industrial Safety and Health Law (Japan)
PICCS	Philippines Inventory of Chemicals and Chemical Substances
NZIoC	New Zealand Inventory of Chemicals
TCSI	Taiwan Chemical Substance Inventory
CMR	Carcinogen, Mutagen or Reproductive Toxicant
GLP	Good Laboratory Practice

Disclaimer

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Product Stewardship Advisory:

PHOENIX LPG PHILIPPINES, INC. wishes to create awareness of all the hazards associated with the storage, handling and use of our products. Carefully studying the accompanying Safety Data Sheets and disseminating the information to all dependent and interested parties is an essential part of any Responsible Care programme.

Prepared by:

Avery Frank L. Macabata

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Health, Safety, Security & Environment Manager

Phoenix LPG Philippines, Inc. - VISMIN