SAFETY DATA SHEET
LIQUIFIED PETROLEUM GAS (LPG)

This Safety Data Sheet is in accordance with Regulation (EC) No 1907/2006 (REACH).
Commission Regulation (EU) 2020/878 of 18 June 2020.

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name	**LIQUIFIED PETROLEUM GAS (LPG)**
Chemical name	Petroleum gases, liquefied
CAS No	68476-85-7
EC No	270-704-2

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses	This multi-purpose product used as fuel in housing and industry.
Uses advised against	No data available.

1.3. Details of the supplier of the safety data sheet

Supplier	**Akpet Gaz A.Ş.** Akatlar Mahallesi, Ebululla Mardin Caddesi No: 22 Maya Park Tower I, 34335 Beşiktaş / İstanbul / Turkey Tel: +90 212 376 66 00 www.lukoil.com.tr e-mail: info@lukoil.com.tr
Contact Person	HSE Manager

1.4. Emergency telephone number

LUKOIL: +90 444 45 85 (7/24)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification (EC No. 1272/2008 and SI 2019 No. 720)

Physical and Chemical Hazards	Flam. Gas 1 - H220; Press. Gas, Liquefied - H280
Human health Hazards	Not classified
Environment Hazards	Not classified

2.2. Label elements

Label In Accordance With (EC) No. 1272/2008
CAS No: 68476-85-7

Signal Word Danger

Hazard Statements

H220	Extremely flammable gas.
H280	Contains gas under pressure; may explode if heated.

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Precautionary Statements

P102	Keep out of reach of children.
P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P243	Take precautionary measures against static discharge.
P260	Do not breathe gas.
P280	Wear protective clothing, gloves, eye and face protection.
P301+312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P370+378	In case of fire: Use foam, carbon dioxide or dry powder for extinction.
P501	Dispose of contents/container in accordance with national regulations.

2.3. Other hazards

Physico-chemical hazards : Occur explosive mixtures with air at ambient temperature.
Human health : Although short term, overdose inhalation can cause death by suffocation effect.
Liquid product contact causes frostbite on skin.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Name	EC No.	CAS No.	Content	Classification (EC 1272/2008)
Petroleum Gases, Liquefied; Petroleum Gas *(Note K-U)*	270-704-2	68476-85-7	%100	Flam. Gas 1 - H220 Press. Gas, Liquefied - H280

Composition Comments

- The data shown are in accordance with the latest EC Directives.
- **Note K:** The classification as a carcinogen need not apply if it can be shown that the substance contains less than 0.1 % w/w 1, 3-butadiene (EINECS No 203-450-8).
- **Note U:** When put on the market gases have to be classified as 'Gases under pressure', in one of the groups compressed gas, liquefied gas, refrigerated liquefied gas or dissolved gas. The group depends on the physical state in which the gas is packaged and therefore has to be assigned case by case.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General information
General first aid, rest, warmth and fresh air. Get medical attention if any discomfort continues.

Inhalation
Move into fresh air and keep at rest. Rinse nose and mouth with water. If necessary, should be applied artificial respiration and heart massage. If there should be given oxygen. Get medical attention if any discomfort continues.

Ingestion
Immediately rinse mouth. Keep person under observation. Do not induce vomiting.
If vomiting occurs, keep head low. Transport immediately to hospital and bring along these instructions.

Skin contact
In case of skin contact with liquid wash with plenty of water. Do not force to remove clothes and other things stuck to the skin since it may be frostbite. Immediately remove contaminated clothing. Wash off promptly and flush contaminated skin with water.
Promptly remove clothing if soaked through and flush skin with water.

Eye contact
Make sure to remove any contact lenses from the eyes before rinsing.
Promptly wash eyes with plenty of water while lifting the eye lids. Get medical attention promptly if symptoms occur after washing.

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4.2. Most important symptoms and effects, both acute and delayed

Inhalation : Headache, dizziness, and nausea.
Ingestion : Nausea, vomiting.
Skin contact : Frostbite.
Eye contact : Eye irritation, redness, lacrimation.

4.3. Indication of any immediate medical attention and special treatment needed

Treat Symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Extinguishing media

Use: Water, dry chemical powder, carbon dioxide extinguishers should be used for local interventions.
Unsuitable extinguishing media DO NOT use water jet.

5.2. Special hazards arising from the substance or mixture

Unusual Fire & Explosion Hazards

Vapours may form explosive mixtures with air.
Vapor is heavier than air so that it can leaking to sewer system and may reach to further ignition sources.

Specific hazards

Environmental release of unburned gas can cause an explosion. Gas accumulation can be in enclosed areas.

5.3. Advice for firefighters

Special Fire Fighting Procedures

If fire persists and if possible gas flow should be cut first. If the flow is stopped, wait for the complete controlled burning of the remaining part. If leakage can't be prevented it should be let to burn. If leakage don't burn stop the gas leak, isolate the ignition sources and remove the personnel. Water and water seal should be used for tank cooling processes and ensuring environmental safety.
Dike and collect extinguishing water. Keep away all non-emergency personnel from fire area.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Fires in enclosed places should be extinguished by trained personnel wearing protective clothing and an oxygen mask.

Protective equipment for fire-fighters

Self contained breathing apparatus and full protective clothing must be worn in case of fire.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Wear protective clothing as described in Section 8 of this safety data sheet.
Do not smoke, use open fire or other sources of ignition. Provide adequate ventilation.
In case of spills, beware of slippery floors and surfaces.
If leakage don't burn stop the gas leak, isolate the ignition sources and remove the personnel.
Gas should be distrubuted by using water spray and personnel should be protected who attempt to stop the leakage.
Do not approach with open flame or cigarette, portable electrical devices such as battery-operated flashlight, radio, mobile phone when lpg leak is noticed in the environment. Immediately shut the devices in the environment which can cause sparkles. Evacuate the area.
Immediately ventilate the area by opening doors and windows when LPG leak is defined in the enclosed environment. Shut off the gas flow by closing LPG cylinders, hood or valves. Continue ventilation until the gas smell is removed in the environment.
Keep away from all objects that can cause ignition and sparkles when LPG leak is defined in the open environment. Disable all motor vehicle from entering leak area. Try to shut off the gas flow with a suitable valve. Evacuate the area.
Leak may be prevented from spreading by spraying water with fog nozzle and shielding according to the direction of the wind.

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6.2. Environmental precautions

Prevent spreading over wide areas.

6.3. Methods and material for containment and cleaning up

Keep all ignition sources away from spilled material. Provide adequate ventilation. Spilled liquid will evaporate completely in enclosed area so that adequate ventilation must be done and should be entered with protective clothing after measurement.

6.4. Reference to other sections

For personal protection, see section 8.
See section 11 for additional information on health hazards.
For waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Avoid contact with eyes and skin. Use appropriate goggles and gloves. Keep away from heat, sparks and open flame.
Do not eat, drink or smoke when using the product. Provide adequate ventilation. Avoid breathing vapor.
Avoid contact with liquid and cold storage tank. Protective shoes and gloves should be worn when using cylinders.

7.2. Conditions for safe storage, including any incompatibilities

Protect against physical damage and/or friction.
Protect from heat, sparks and flame. Keep in a cool, well-ventilated area.
Store away from incompatible materials.
It should be stored in tanks designing according to the product.
Storage tanks should be labeled and should be kept closed when out of use.
Do not remove the warning signs since some products may be present in empty tanks.
Despite the possibility of the empty tanks containing product vapor should not be done cutting, welding, soldering processes.
There is possibility of ignition vapour of product are collected in the storage tanks. Therefore, static electricity must be discharged.
Measures should be taken against the igniton source while filling and discharge.
Equipments such as pumps etc. must be earthed or transmission cables must be connected each other by a cable to avoid accumulation of static electiricity.
Proper distances as per legal regulations must be applied in placement of the external tanks used in housing and industry.
Should not be entered into the storage tanks and tanks must be labeled.
Warning signs must not be removed from storage tanks.

7.3. Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Name	STD	TWA - 8 Hrs		STEL - 15 Min		Notes
Petroleum Gases, Liquefied; Petroleum Gas	ACGIH	1000 ppm	1750 mg/m^3	1250 ppm	2180 mg/m^3	

ACGIH = American Conference of Industrial Hygienists.

8.2. Exposure controls

Protective equipment

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Process conditions
Provide eyewash, quick drench.

Engineering measures
Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded.

Respiratory equipment
Appropriate respiratory equipment should be used when the possibility of exposure to hydrocarbon vapor. Masks in accordance with EN138, EN141 standard.

Hand protection
For prolonged or repeated skin contact use suitable protective gloves. Gloves in accordance with EN374. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material. Nitrile, neoprene gloves are recommended.

Eye protection
Wear approved safety goggles. Goggles in accordance with EN166 standard.

Hygiene measures
Promptly remove non-impervious clothing that becomes contaminated. When using do not eat, drink or smoke.
Wash hands after contact. Wash promptly if skin becomes contaminated.

Skin protection
Protective clothing should be worn. Anti-static and flame-retardant protective clothing is recommended to wear.

Environmental Exposure Controls
Please act in accordance with local and national laws.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Identifier	Unit	Value	Test method
Appearance		Liquid (under pressure)	
Colour		Colorless	
Odour		Characteristic.	
Odour threshold		No data available.	
pH value		No data available.	
Melting point / freezing point		No data available.	
Viscosity		No data available.	
Initial boiling point and range		No data available.	
Evaporation rate		No data available.	
Flammability (solid,gas)		No data available.	
Vapor density		No data available.	
Relative density		No data available.	
Density, 15 ° C	kg/m^3	550	
Flash Point	°C	-100	
Auto-ignition temperature	°C	No data available.	

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Vapor pressure (RVP)	kPa	< 1430	TS1298 EN ISO 4256
Explosion limit - lower	% volume	2.0	
Explosion limit - upper	% volume	9.0	
1,3 Butadien	% m/m	< 0.1	
Specific gravity		No data available.	
Solubility		No data available.	
Coefficient of dispersion: n-octanol/water		No data available.	
Decomposition temperature		No data available.	
Oxidizing properties		No data available.	
Explosive properties		No data available.	
Particle characteristics		Not applicable.	

9.2. Other information

No information required.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stable under normal temperature conditions and recommended use. Stable under the prescribed storage conditions.
It is in gas form at ambient temperature.

10.3. Possibility of hazardous reactions

Will not polymerise.

10.4. Conditions to avoid

Should be kept away from sources of ignition.

10.5. Incompatible materials

Avoid contact with strong reducing agent (oxidizing).

10.6. Hazardous decomposition products

Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute Toxicity

Based on available data the classification criteria are not met.

Skin corrosion/irritation

Based on available data the classification criteria are not met.

Serious eye damage / irritation

Based on available data the classification criteria are not met.

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Skin and respiratory sensitivity
Based on available data the classification criteria are not met.

Germ cell mutagenicity:
Genotoxicity - In Vitro/ In Vivo
Based on available data the classification criteria are not met.

Carcinogenicity:
Based on available data the classification criteria are not met.

Reproductive Toxicity – Fertility/ Development
Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure:
Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure:
Based on available data the classification criteria are not met.

Inhalation
In case of inhalation in low concentrations may cause conditions such as nausea, dizziness, headache, drowsiness. Symptomps of shortness of oxygen in high concentration and central nervous system depression leads to a rapid loss of consciousness.

Ingestion
Using of the product isn't harmful under normal conditions. However, even if short term, may cause loss of consciousness and sudden death when taken in high doses.

Skin contact
In case of skin contact may cause frostbite and freezing.

Eye contact
Liquid product may cause serious damage in case of eye contact.

11.2 Information on other hazards
This product does not contain any known or suspected endocrine disruptors.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity
Adverse effects to the aquatic environment and the environment is not expected.

12.2. Persistence and degradability
When the product is poured, evaporates and mixes with air.

12.3. Bioaccumulative potential
There is no evidence that accumulating in the soil.

12.4. Mobility in soil
Product is insoluble in water. Volatile components of the product will be dispersed into the atmosphere.

12.5. Results of PBT and vPvB assessment
This product does not contain any PBT or vPvB substances.

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12.6. Endocrine disrupting properties

The product does not contain any endocrine disrupting substance.

12.7. Other adverse effects

No information required.

SECTION 13: DISPOSAL CONSIDERATIONS

General information

Disposed of as hazardous waste. Waste must be treated as the product itself.

13.1. Waste treatment methods

LPG including containers should not be thrown and all cylindrical vessel or boiler should be returned to the seller.
Do not remove the signs or labels since some products may be present in empty containers.
Should not be done welding and soldering processes since empty tanks (container, tube, boiler, cylinder) containing ignitible product residue.

SECTION 14: TRANSPORT INFORMATION

14.1. UN number or ID number

UN No. (ADR/RID/ADN)	1965
UN No. (IMDG)	1965
UN No. (ICAO)	1965

14.2. UN proper shipping name

Proper Shipping Name	HYDROCARBON GAS MIXTURE, LIQUEFIED, N.O.S. (Petroleum Gases, Liquefied)

14.3. Transport hazard class(es)

ADR/RID/ADN Class	2.1
ADR/RID/ADN Class	Class 2: Gases
ADR Label No.	2.1
IMDG Class	2.1
ICAO Class/Division	2.1
Transport Labels	

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally Hazardous Substance/Marine Pollutant

No.

14.6. Special precautions for user

EMS	F-D, S-U
ADR transport category	2
Emergency Action Code	2YE
Hazard No. (ADR)	23
Tunnel restriction code	(B/D)

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14.7. Maritime transport in bulk according to IMO instruments

No data available.

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

- Commission Regulation (EU) 2020/878 of 18 June 2020.
- Health and Safety at Work etc. Act 1974 (as amended).
- EH40/2005 Workplace exposure limits.
- Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).
- Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

Sevesso Directive

P2 Low Tier: 10 tonnes Upper Tier: 50 tonnes

Restrictions (Annex XVII Regulation 1907/2006)

Entry: 28, 29 (CAS: 68476-85-7)

15.2. Chemical Safety Assessment

No chemical safety assessment has been carried out.

SECTION 16: OTHER INFORMATION

Abbreviations used in safety data sheet

ADR: European Agreement on International Carriage of Dangerous Goods by Road.
ADN: European Agreement on the International Carriage of Dangerous Goods by Inland Waterways.
RID: European Agreement on International Carriage of Dangerous Goods by Rail.
IATA: International Air Transport Association.
ICAO-TI: Technical Specification for Safe Transport of Dangerous Goods by Air.
IMDG: International Maritime Dangerous Goods.
TWA: Time weighted average
ATE: Estimated value of acute toxicity
EC No: European Community number
CAS: Chemical Theory Service.
LD50: Substance that causes 50% (half) death in the test animals group (Median Fatal Dose).
LC50: Substance concentration causing 50% (half) death in the test animals group.
EC50: Effective Concentration of the substance causing the maximum of 50%.
PBT: Persistent, Bioaccumulative and Toxic substance.
vPvB: Very Persistent, Very Bioaccumulative.
SEA: Classification, labeling, packaging regulation
DNEL: Derivative Inactive Level
PNEC: Estimated Unaffected Concentration
BHOT: Specific Target Organ Toxicity

Information Sources

This SDS is written based on the information received from rawmaterial supplier.
European Chemicals Agency (ECHA)

Revision Comments

Revised under current regulations.

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Hazard Statements In Full

H220	Extremely flammable gas.
H280	Contains gas under pressure; may explode if heated.

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Issued Note

This SDS is prepared based on the information and documents received from product owner. CRAD or/and SDS author shall not be responsible for incorrect prepared of SDS and pecuniary loss or intangible damages because of deficient or wrong information and documents which comes from product owner.

Disclaimer

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