



## **SAFETY DATA SHEET** **Liquefied Petroleum Gas (LPG)**

According to Regulation (EU) No 2015/830

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

#### **1.1. Product identifier**

|                      |                                      |
|----------------------|--------------------------------------|
| <b>Product name</b>  | <b>Liquefied Petroleum Gas (LPG)</b> |
| <b>Chemical name</b> | Petroleum gases, liquefied           |
| <b>CAS No</b>        | 68476-85-7                           |
| <b>EC No</b>         | 270-704-2                            |

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

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

#### **1.3. Details of the supplier of the safety data sheet**

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

|                       |             |
|-----------------------|-------------|
| <b>Contact Person</b> | 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 1272/2008)**

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

#### **2.2. Label elements**

**Label In Accordance With (EC) No. 1272/2008**

**CAS No:** 68476-85-7



**Signal Word** Danger



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**Hazard Statements**

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

**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<br>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.



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**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.

**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 distributed 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 electricity.  
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;<br>Petroleum Gas | ACGIH | 1000 ppm    | 1750 mg/m <sup>3</sup> | 1250 ppm      | 2180 mg/m <sup>3</sup> |       |

ACGIH = American Conference of Industrial Hygienists.

**8.2. Exposure controls**

**Protective equipment**



**Process conditions**

Provide eyewash, quick drench.



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**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.

**Hand protection**

For prolonged or repeated skin contact use suitable protective gloves.

**Eye protection**

Wear approved safety goggles.

The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material.

**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.         |                    |
| Density, 15 °             | kg/m <sup>3</sup> | 550                     |                    |
| Flash Point               | °C                | -100                    |                    |
| Auto-ignition temperature | °C                | No data available.      |                    |
| 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                   |                    |

**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.



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**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 toxicological effects**

**Serious eye damage / irritation**

No data available.

**Skin and respiratory sensitivity**

No data available.

**Germ cell mutagenicity:**

**Genotoxicity - In Vitro/ In Vivo**

No data available.

**Carcinogenicity:**

No data available.

**Reproductive Toxicity – Fertility/ Development**

No data available.

**Specific target organ toxicity - single exposure:**

No data available.

**Specific target organ toxicity - repeated exposure:**

No data available.

**Inhalation**

In case of inhalation in low concentrations may cause conditions such as nausea, dizziness, headache, drowsiness. Symptoms 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.

**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.



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**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.

**12.6. 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 ignitable product residue.

**SECTION 14: TRANSPORT INFORMATION**

**14.1. UN 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.



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**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)    |

**14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

No data available.

**SECTION 15: REGULATORY INFORMATION**

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

**UK Regulatory References**

Chemicals (Hazard Information & Packaging) Regulations.  
Fire precautions Act 1971.

**Environmental Listing**

No listing noted.

**Statutory Instruments**

Export of Dangerous Chemicals Regulations.

**Approved Code Of Practice**

Safety Data Sheets for Substances and Preparations.

**Guidance Notes**

Workplace Exposure Limits EH40. Introduction to Local Exhaust Ventilation HS(G)37. CHIP for everyone HSG(108).

**EU Legislation**

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.

**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 Permanent, Very Biofriendly.





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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**

This form is designed for the first time for this product.

**Issued By**

Bülent Özdemir / CRAD  
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**Issued Note**

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