



SAFETY DATA SHEET CNG- COMPRESSED NATURAL GAS

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 CNG- COMPRESSED NATURAL GAS

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, Compressed - H280
Human health Hazards Not classified.
Environment Hazards Not classified.

The Full Text for all hazard statements are displayed in section 16.

2.2. Label elements

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



Signal Word Danger

Hazard Statements

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



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Precautionary Statements

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.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Not applicable.

3.2. Mixtures

Name	EC No.	CAS No.	Content	Classification (EC 1272/2008)
Methane*	200-812-7	74-82-8	% 80-98	Flam. Gas 1 - H220 Press. Gas, Compressed - H280
Ethane*	200-814-8	74-84-0	% <12	Flam. Gas 1 - H220 Press. Gas, Compressed - H280
Propane*	200-827-9	74-98-6	% <4	Flam. Gas 1 - H220 Press. Gas, Compressed - H280

The Full Text for all hazard statements are displayed in section 16.

Composition Comments

- The data shown are in accordance with the latest EC Directives.
- *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

Natural gas isn't poisonous. Due to the release of natural gas, the amount of oxygen in the environment will be reduced. Organization of muscle slightly weakens when oxygen concentration in the inhaled air falls below 17%, dizziness and tiredness occurs below 12%, loss of consciousness occurs at 9% and breathing and heartbeat stops below 6%, people lost their lives. It has choking effect.

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.



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Skin contact

In case of skin contact with liquid wash with plenty of water. 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

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 : No data available.
Eye contact : No data available.

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: Dry chemical or CO₂. Water spray or fog. DO NOT EXTINGUISH A LEAKING GAS FIRE UNLESS LEAK CAN BE STOPPED.

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. Continue to cool fire until flames are extinguished. As the vapour warms above minus 88°C it becomes lighter than air. Vapors may travel to source of ignition and flash back.

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

Evacuate area. Remove the pressurized gas cylinders from the immediate vicinity. Take precautionary measures against static discharge. 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 gas cylinder cooling processes and ensuring environmental safety.

Dike and collect extinguishing water. Keep away all non-emergency personnel from fire area.

If the fire is extinguished and the flow of gas continues, use increased ventilation to prevent build-up of explosive atmosphere.

Ventilation fans must be explosion proof. Use non-sparking tools to close gas cylinder valves.

Use water spray to cool surrounding gas cylinders. Be cautious of a Boiling Liquid Evaporating Vapor Explosion, BLEVE, if flame is impinging on surrounding gas cylinders. Avoid solid water streams.

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.



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Do not smoke, do not use fire or other igniters. Provide proper ventilation.
If the leak does not burn, stop the gas leak, isolate from ignition sources and remove personnel.
Gas should be dispersed using water spray and personnel trying to stop the leak should be protected.

When a CNG leak is detected, do not approach the leaked area with an open flame or a portable electrical device such as a cigarette, battery-powered flashlight, walkie-talkie, or mobile phone.
Immediately turn off any devices in the environment that may create sparks. Evacuate the environment.

If a CNG leak is detected in a closed environment, ventilate the environment by opening doors and windows immediately. Cut off the gas flow by closing the CNG cylinder, shutter or valves in the installation. Continue ventilation until the smell of gas disappears.

If a CNG leak is detected in an open environment, keep away all kinds of objects that may cause ignition and sparks, and prohibit the entry of motor vehicles into the vicinity of the leak. Try to shut off the gas flow through a suitable valve. Evacuate the environment. Depending on the direction of the wind, the spread of leakage can be prevented by spraying water with a fog nozzle and creating a curtain.

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. Recollecting the spilled product should be done by qualified personnel.

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 gas cylinder. 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 gas cylinders designing according to the product.
Storage gas cylinders 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 gas cylinders.
Despite the possibility of the empty gas cylinders containing product vapor should not be done cutting, welding, soldering processes.
There is possibility of ignition vapour of product are collected in the storage gas cylinders. 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 gas cylinders used in housing and industry.
Should not be entered into the storage gas cylinders and gas cylinders must be labeled.
Warning signs must not be removed from storage gas cylinders.

7.3. Specific end use(s)

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



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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Name	STD	TWA - 8 Hrs		STEL - 15 Min		Notes
Methane	WEL	1000 ppm	650 mg/m ³			
Ethane	WEL	1000 ppm	1200 mg/m ³			
Propane	WEL	1000 ppm	1800 mg/m ³			

WEL = Workplace Exposure Limits.

8.2. Exposure controls

Protective equipment



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

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		Gas	



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Colour		Colorless
Odour		Special scented.
Odour threshold		No information available.
pH value		No information available.
Melting point		No information available.
Initial boiling point and range		No information available.
Flash point		No information available.
Evaporation rate		No information available.
Density, 15 °	kg/m ³	550
Freezing Point	°C	-182
Auto-ignition temperature	°C	539
Critical pressure	bar	45,95
Critical temperature	°C	-82,5
Explosion limit - lower	% volume	5.0
Explosion limit - upper	% volume	15.0
Gas cylinder pressure	bar	200
Flammability (solid,gas)		No information available.
Vapor pressure		No information available.
Vapor density		No information available.
Relative density		No information available.
Specific gravity		No information available.
Solubility		No information available.
Coefficient of dispersion: n-octanol/water		No information available.
Decomposition temperature		No information available.
Viscosity		No information available.
Oxidising properties		No information available.
Explosive properties		No information available.
Particle characteristic		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.



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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) and halogen (as chlorine).

10.6. Hazardous decomposition products

Thermal decomposition or combustion may liberate carbon oxides.

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.

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. 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

No data available.

Eye contact

No data available.

11.2 Information on other hazards

This product does not contain any known or suspected endocrine disruptors.



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SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

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

Methane

LC50, fish, 96 h	91.42 mg/l
LC50, invertebrates, Daphnia magna, 48 h	69.43 mg/l
EC50, aquatic plants, green algae, 96 h	8.57 mg/l

Ethane

LC50, fish, 96 h	24.11 mg/l
LC50, invertebrates, Daphnia magna, 48 h	14.22 mg/l
EC50, aquatic plants, green algae, 96 h	7.71 mg/l

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.

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

CNG 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 or ID number

UN No. (ADR/RID/ADN)	1971
UN No. (IMDG)	1971
UN No. (ICAO)	1971

14.2. UN proper shipping name

Proper Shipping Name NATURAL GAS, COMPRESSED



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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	2SE
Hazard No. (ADR)	23
Limited quantities	(B/D)

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).

Seveso Directive

P2 Low Tier: 10 tonnes Upper Tier: 50 tonnes

Restrictions (Annex XVII Regulation 1907/2006)

No specific restrictions on use are known for this product.

15.2. Chemical Safety Assessment

No chemical safety assessment has been carried out.



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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

This form is designed for the first time for this product. Chapter 8, 11, 15, 16 have been updated.

Classification procedures

Flam. Gas 1 - H220 : Based on the test data.
Press. Gas, Compressed - H280 : Based on the test data.

Hazard Statements In Full

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

Issued By

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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

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.