

SAFETY DATA SHEET

(in accordance with Regulation (EU) 2020/878)



Liquified Natural Gas

Version 1 Date of compilation: 5/05/2008

Version 11 (replaces version 10)

Revision date: 22/03/2023

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

1.1 Product identifier.

Product Name:	Liquified Natural Gas
Chemical Name:	Liquified Natural Gas
CAS No:	68410-63-9
EC No:	270-085-9
UFI:	XA6J-6QDW-XSKW-UEYM

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

Industrial use
Raw material for industry
Fuels

Uses advised against:

Uses other than those recommended.

1.3 Details of the supplier of the safety data sheet.

Company:	ENAGÁS TRANSPORTE S.A.U.
Address:	Paseo de los Olmos, 19
City:	28005 - Madrid
Province:	Madrid
Telephone:	0091 356 82 22 (24h/365d)
E-mail:	SEGURIDAD_Y_SALUD@enagas.es

1.4 Emergency telephone number: 0091 356 82 22 (Available 24 hours)

National Poisons Information Centre Beaumont Hospital :
PO Box 1297
Beaumont Road
9 Dublin
+353 1 809 2566 (Healthcare professionals-24/7)
+353 1 809 2166 (public, 8am - 10pm, 7/7)

SECTION 2: HAZARDS IDENTIFICATION.

2.1 Classification of the substance or mixture.

In accordance with Regulation (EC) No 1272/2008:

Flam. Gas 1A : Extremely flammable gas.

Press. Gas : Contains refrigerated gas; may cause cryogenic burns or injury.

2.2 Label elements.

Labelling in accordance with Regulation (EC) No 1272/2008:

Pictograms:



Signal Word:

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Danger

Hazard statements:

- H220 Extremely flammable gas.
H281 Contains refrigerated gas; may cause cryogenic burns or injury.

Precautionary statements:

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P282 Wear cold insulating gloves and either face shield or eye protection.
P336+P315 Thaw frosted parts with lukewarm water. Do not rub affected area. Get immediate medical advice/attention.
P377 Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
P381 In case of leakage, eliminate all ignition sources.
P403 Store in a well-ventilated place.

2.3 Other hazards.

The substance is not PBT
The substance is not vPvB
Substance does not have endocrine disrupting properties.

In normal use conditions and in its original form, the product itself does not involve any other risk for health and the environment.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS.

3.1 Substances.

Identifiers	Name	Concentrate	(*)Classification - Regulation (EC) No 1272/2008	
			Classification	Specifics concentration limits and Acute toxicity estimate
CAS No: 68410-63-9 EC No: 270-085-9	Liquified Natural Gas	90 - 100 %	-	-

3.2 Mixtures.

Not Applicable.

SECTION 4: FIRST AID MEASURES.

4.1 Description of first aid measures.

It is recommended to move the affected person out of the exposure area.

Inhalation.

It may cause asphyxia at high concentrations. Asphyxia can lead to loss of consciousness or mobility. Take the victim into open air; keep them warm and calm. If breathing is irregular or stops, perform artificial respiration.

Eye contact.

Remove contact lenses, if present and if it is easy to do. Wash eyes with plenty of clean and cool water for at least 10 minutes while pulling eyelids up, and seek medical assistance.

Skin contact.

Do not rub affected areas. Wash skin vigorously with water and soap or a suitable skin cleaner. NEVER use solvents or thinners.

Ingestion.

This route of exposure is unlikely.

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

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No known acute or delayed effects from exposure to the product.

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

Request immediate medical attention. If respiratory and/or heart failure occurs, perform resuscitation manoeuvres. Never administer anything orally to persons who are unconscious. If the person vomits, clear the respiratory tract.

SECTION 5: FIREFIGHTING MEASURES.

In case of fire, as a general hazard, heat can cause containers to explode.

The product is Extremely inflammable, it can cause or considerably worsen a fire, the necessary prevention measures should be taken and risks avoided. In case of fire, the following measures are recommended:

5.1 Extinguishing media.

Suitable extinguishing media:

Extinguisher powder or CO₂.

Unsuitable extinguishing media:

Do not use a direct stream of water to extinguish. In the presence of electrical voltage, you cannot use water or foam as extinguishing media.

5.2 Special hazards arising from the substance or mixture.

Special risks.

Exposure to combustion or decomposition products can be harmful to your health.

During a fire and depending on its magnitude the following may occur:

- Flammable vapors or gases.
- Explosions.

5.3 Advice for firefighters.

Use water to cool tanks, cisterns, or containers close to the heat source or fire. Take wind direction into account. Prevent the products used to fight the fire from going into drains, sewers, or waterways. Follow the instructions given in the emergency or fire evacuation plan or plans if available. Move containers away from the area if there is no danger in doing so. Keep away from containers and continue cooling them from a safe place. Stop the leak if this can be done safely and do not put out fire until the leak has been closed off. If it is not possible to keep the fire under control, leave the area and let it burn.

Fire protection equipment.

According to the size of the fire, it may be necessary to use protective suits against the heat, individual breathing equipment, gloves, protective goggles or facemasks, and boots. During extinction and depending on the magnitude and proximity to the fire, additional protective equipment such as chemical protection gloves, heat-reflecting suits or gas-tight suits may be required.

SECTION 6: ACCIDENTAL RELEASE MEASURES.

6.1 Personal precautions, protective equipment and emergency procedures.

Eliminate possible ignition points and ventilate the area. No smoking. Avoid breathing fumes. Isolate the area and ensure adequate ventilation. Stockpiling in basements, pits or any confined space or depressed area can be hazardous. Use a self-contained breathing apparatus when the atmosphere is not suitable to be breathed. For exposure control and individual protection measures, see section 8.

6.2 Environmental precautions.

Product not classified as hazardous for the environment, avoid spillage as much as possible.

6.3 Methods and material for containment and cleaning up.

Use soapsuds to detect small leaks. Stop the leak if this can be done safely. Ensure adequate ventilation to prevent the accumulation of gases or vapours.

En caso de que el gas condense:

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Contain and collect spillage with inert absorbent material (earth, sand, vermiculite, Kieselguhr...) and clean the area immediately with a suitable decontaminant. Deposit waste in closed and suitable containers for disposal, in compliance with local and national regulations (see section 13).

6.4 Reference to other sections.

For exposure control and individual protection measures, see section 8.

For later elimination of waste, follow the recommendations under section 13.

SECTION 7: HANDLING AND STORAGE.

7.1 Precautions for safe handling.

The fumes are heavier than air and can spread across the ground. They can form explosive mixtures with air. Prevent the creation of flammable or explosive fume concentrations in the air; prevent fume concentrations above work exposure limits. The product must only be used in areas where all unprotected flames and other ignition points have been eliminated. Electrical equipment has to be protected according to applicable standards.

The product can be electrostatically charged: always use earth grounds when transferring the product. Operators must use anti-static footwear and clothing, and floors must be conductors.

Keep the container tightly closed and isolated from heat sources, sparks, and fire. Do not use tools that can cause sparks. For personal protection, see section 8.

In the application area, smoking, eating, and drinking must be prohibited.

Follow legislation on occupational health and safety.

Pressurised gases must be handled by suitably trained and experienced individuals. Use equipment suitable for supply pressure and temperature. Protect containers against physical damage and keep valves clean and in perfect condition. Do not tamper with original packaging.

7.2 Conditions for safe storage, including any incompatibilities.

Store according to local legislation. Observe indications on the label. Store the containers between 5 and 25 °C, in a dry and well-ventilated place, far from sources of heat and direct solar light. Keep far away from ignition points. Keep away from oxidising agents and from highly acidic or alkaline materials. Do not smoke. Prevent the entry of non-authorized persons. It must not be stored under conditions conducive to corrosion of the container. Protect containers against physical damage and inspect them regularly to ensure they are in good condition.

The product is not affected by Directive 2012/18/EU (SEVESO III).

7.3 Specific end use(s).

Not available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION.

8.1 Control parameters.

The product does NOT contain substances with Professional Exposure Environmental Limit Values. The product does NOT contain substances with Biological Limit Values.

8.2 Exposure controls.

Measures of a technical nature:

Provide adequate ventilation, which can be achieved by using good local exhaust-ventilation and a good general exhaust system.

Concentration:	100 %
Uses:	Industrial use Raw material for industry Fuels
Breathing protection:	If the recommended technical measures are observed, no individual protection equipment is necessary.
Hand protection:	If the product is handled correctly, no individual protection equipment is necessary.
Eye protection:	

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If the product is handled correctly, no individual protection equipment is necessary.

Skin protection:

PPE:	Work footwear.
Characteristics:	<<CE>> marking, category II.
CEN standards:	EN ISO 13287, EN 20347
Maintenance:	This product adapts to the first user's foot shape. That is why, as well as for hygienic reasons, it should not be used by other people.
Observations:	Work footwear for professional use includes protection elements aimed at protecting users against any injury resulting from an accident

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES.

9.1 Information on basic physical and chemical properties.

Physical state: Gas - refrigerated liquefied

Colour: Colourless

Odour: Odourless

Odour threshold: Not available

Melting point: -183 °C

Freezing point: -183 °C

Boiling point or initial boiling point and boiling range: -161 °C

Flammability: Extremely flammable gas.

Lower explosion limit: 4,4

Upper explosion limit: 17

Flash point: -188 °C

Auto-ignition temperature: 540 °C

Decomposition temperature: Not available

pH: Not applicable (Substance/mixture is a gas).

Kinematic viscosity: Not available

Solubility: Not applicable (Water: Insoluble).

Hydrosolubility: Not applicable (Water: Insoluble).

Liposolubility: Not applicable

Partition coefficient n-octanol/water (log value): < 2,8

Vapour pressure: 147000 Pa

Absolute density: 460 kg/m³

Relative density: 0,54-0,66

Relative vapour density: > 1 m³/kg

Particle characteristics: Not applicable (Not relevant for this type of product)

9.2 Other information

Critical temperature: -82 °C

Storage temperatures: -160 °C

Viscosity: Not available

Explosive properties: Not applicable. The study does not need to be conducted because there are no chemical groups associated with explosive properties present in the molecule.

Oxidizing properties: Not applicable. The classification procedure needs not to be applied because there are no chemical groups present in the molecule which are associated with oxidising properties.

Dropping point: Not available

Blink: Not available

SECTION 10: STABILITY AND REACTIVITY.

10.1 Reactivity.

If the storage conditions are satisfied, does not produce dangerous reactions.

10.2 Chemical stability.

Stable under the recommended handling and storage conditions (see section 7).

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10.3 Possibility of hazardous reactions.

Contains refrigerated gas; may cause cryogenic burns or injury.

10.4 Conditions to avoid.

Avoid the following conditions:

- Heating.
- Shocks.

10.5 Incompatible materials.

Avoid the following materials:

- Flammable materials.
- Explosives materials.
- Corrosive materials.

10.6 Hazardous decomposition products.

No decomposition if used for the intended uses.

SECTION 11: TOXICOLOGICAL INFORMATION.

11.1 Information on hazard classes as defined in Regulation (EC) N° 1272/2008.

Toxicological information.

Name	Acute toxicity			
	Type	Test	Kind	Value
Liquified Natural Gas CAS No: 68410-63-9 EC No: 270-085-9	Oral			
	Dermal			
	Inhalation	CL50	Rat	658 mg/L (4h)

a) acute toxicity;

Not conclusive data for classification.

b) skin corrosion/irritation;

Not conclusive data for classification.

c) serious eye damage/irritation;

Not conclusive data for classification.

d) respiratory or skin sensitisation;

Not conclusive data for classification.

e) germ cell mutagenicity;

Not conclusive data for classification.

f) carcinogenicity;

Not conclusive data for classification.

g) reproductive toxicity;

Not conclusive data for classification.

h) STOT-single exposure;

Not conclusive data for classification.

i) STOT-repeated exposure;

Not conclusive data for classification.

j) aspiration hazard;

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Not conclusive data for classification.

11.2 Information on other hazards.

Endocrine disrupting properties

This product does not contain components with endocrine-disrupting properties with effects on human health.

Other information

There is no information available on other adverse health effects.

SECTION 12: ECOLOGICAL INFORMATION.

12.1 Toxicity.

No information is available regarding the ecotoxicity.

12.2 Persistence and degradability.

No information is available regarding the biodegradability

No information is available on the degradability

No information is available about persistence and degradability of the product.

The product evaporates quickly and enters the gas phase at room temperature. Information on its persistence and degradability is not relevant.

12.3 Bioaccumulative potential.

Information about the bioaccumulation.

Name	Bioaccumulation			
	Log Pow	BCF	NOECs	Level
Liquefied Natural Gas CAS No: 68410-63-9 EC No: 270-085-9	< 28	-	-	Very low

12.4 Mobility in soil.

No information is available about the mobility in soil.

Soil or water contamination is unlikely due to high volatility of the product.

12.5 Results of PBT and vPvB assessment.

No information is available about the results of PBT and vPvB assessment of the product.

12.6 Endocrine disrupting properties.

This product doesn't contain components with environmental endocrine disrupting properties.

12.7 Other adverse effects.

No information is available about other adverse effects for the environment.

SECTION 13: DISPOSAL CONSIDERATIONS.

13.1 Waste treatment methods.

Dispose of packaging through the supplier. Transport, unloading, treatment or disposal activities may be subject to additional local/national legislation. Waste and empty containers must be handled and eliminated according to current, local/national legislation.

Follow the provisions of Directive 2008/98/EC regarding waste management.

SECTION 14: TRANSPORT INFORMATION.

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Transport following ADR rules for road transport, RID rules for railway, ADN for inner waterways, IMDG for sea, and ICAO/IATA for air transport.

Land: Transport by road: ADR, Transport by rail: RID.

Transport documentation: Consignment note and written instructions

Sea: Transport by ship: IMDG.

Transport documentation: Bill of lading

Air: Transport by plane: ICAO/IATA.

Transport document: Airway bill.

14.1 UN number or ID number.

UN No: UN1972

14.2 UN proper shipping name.

Description:

ADR/RID: UN 1972, NATURAL GAS, REFRIGERATED LIQUID, 2.1, (B/D)

IMDG: UN 1972, NATURAL GAS, REFRIGERATED LIQUID, 2.1 (-188°C)

ICAO/IATA: PROHIBITED

14.3 Transport hazard class(es).

Class(es): 2

14.4 Packing group.

Packing group: Not applicable.

14.5 Environmental hazards.

Marine pollutant: No

Transport by ship, FEm – Emergency sheets (F – Fire, S - Spills): F-D,S-U

14.6 Special precautions for user.

Labels: 2.1



Hazard number: 223

ADR LQ: 0

IMDG LQ: 0

ICAO LQ: Not applicable.

Provisions concerning carriage in bulk ADR: Not authorized carriage in bulk in accordance with ADR.

Proceed in accordance with point 6.

14.7 Maritime transport in bulk according to IMO instruments.

The product is not transported in bulk.

SECTION 15: REGULATORY INFORMATION.

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

The product is not affected by the Regulation (EC) No 1005/2009 of the European Parliament and of the Council of 16 September 2009 on substances that deplete the ozone layer.

Product classification according to Annex I of Directive 2012/18/EU (SEVESO III): N/A

The product is not affected by Regulation (EU) No 528/2012 concerning the making available on the market and use of biocidal products.

The product is not affected by the procedure established Regulation (EU) No 649/2012, concerning the export and import of dangerous chemicals.

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15.2 Chemical safety assessment.

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

SECTION 16: OTHER INFORMATION.

Classification codes:

Flam. Gas 1A : Flammable gas, Category 1A
Press. Gas : Gases under pressure, Refrigerated-liquefied

Modifications compared to the previous version:

- Changes to the description of first aid (SECTION 4.1)
- Changes in the main symptoms (SECTION 4.2)
- Added indication for medical attention. (SECTION 4.3)
- Modified extinguishing media (SECTION 5.1)
- Changes to specific hazards (SECTION 5.2)
- Modified recommendations for fire-fighting personnel. (SECTION 5.3)
- Changes to personal precautions, protective equipment and emergency procedures. (SECTION 6.1)
- Changes to environmental precautions. (SECTION 6.2)
- Changes in containment and clean-up methods and material (SECTION 6.3)
- Changes in handling and storage. (SECTION 7)
- Changes in control parameters (SECTION 8.1)
- Modified exposure controls (SECTION 8.2)
- Other information added. (SECTION 9.2)
- Changes in stability and reactivity (SECTION 10)
- Changes in toxicological information. (SECTION 11)
- Ecological information changed (SECTION 12)
- Changes in the waste treatment methods (SECTION 13)
- Transport information amended (SECTION 14)
- Regulatory information amended (SECTION 15)

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Physical hazards	On basis of test data
Health hazards	Calculation method
Environmental hazards	Calculation method

It is advisable to carry out basic training with regard to health and safety at work in order to handle this product correctly.

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Abbreviations and acronyms used:

ADR/RID: European Agreement concerning the International Carriage of Dangerous Goods by Road.

BCF: Bioconcentration factor.

CEN: European Committee for Standardization.

EC50: Half maximal effective concentration.

PPE: Personal protection equipment.

IATA: International Air Transport Association.

ICAO: International Civil Aviation Organization.

IMDG: International Maritime Code for Dangerous Goods.

LC50: Lethal concentration, 50%.

LD50: Lethal dose, 50%.

NOEC: No observed effect concentration.

RID: Regulations Concerning the International Transport of Dangerous Goods by Rail.

Key literature references and sources for data:

<http://eur-lex.europa.eu/homepage.html>

<http://echa.europa.eu/>

Regulation (EU) 2020/878.

Regulation (EC) No 1907/2006.

Regulation (EC) No 1272/2008.

The information given in this Safety Data Sheet has been drafted in accordance with COMMISSION REGULATION (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemical substances and mixtures (REACH).

The information in this Safety Data Sheet on the Preparation is based on current knowledge and on current EC and national laws, as far as the working conditions of the users is beyond our knowledge and control. The product must not be used for purposes other than those that are specified without first having written instructions on how to handle. It is always the responsibility of the user to take the appropriate measures in order to comply with the requirements established by current legislation. The information contained in this Safety Sheet only states a description of the safety requirements for the preparation, and it must not be considered as a guarantee of its properties.