

LIQUIFIED NATURAL GAS (LNG)

SDS # : 089791

previous revision date : 2022/09/26

SECTION 1: Identification of the substance/mixture and of the company/ undertaking

1.1 Product identifier

Product name : LIQUIFIED NATURAL GAS (LNG)
EC number : 232-343-9
CAS number : 8006-14-2
Other means of identification : Synthetic natural gas; GAS,NATURAL; LIQUIFIED NATURAL GAS; Natural gas, compressed; Marsh gas

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

Identified uses
Fuel

1.3 Details of the supplier of the safety data sheet

TotalEnergies Marketing France
562 avenue du parc de l'île
92000 Nanterre
FRANCE
Tel: +33 (0)1 41 35 40 00
rm.mkefr-fds@totalenergies.com

Contact

H.S.E

1.4 Emergency telephone number

National advisory body/Poison Center

Telephone number : France - ORFILA (INRS) Tél : +33 (0)1 45 42 59 59
In France - Poison centers:
ANGERS : 02 41 48 21 21
BORDEAUX : 05 56 96 40 80
LILLE : 08 00 59 59 59
LYON : 04 72 11 69 11
MARSEILLE : 04 91 75 25 25
NANCY : 03 83 22 50 50
PARIS : 01 40 05 48 48
STRASBOURG : 03 88 37 37 37
TOULOUSE : 05 61 77 74 47

Supplier

Telephone number : Emergency phone: +44 1235 239670

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : UVCB

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Flam. Gas 1A, H220
Press. Gas (Ref. Liq.), H281

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms :



Signal word : Danger

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

Precautionary statements

General : P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
P103 - Read carefully and follow all instructions.

Prevention : P282 - Wear cold insulating gloves and either face shield or eye protection.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 - Keep container tightly closed.
P241 - Use explosion-proof electrical, ventilating, lighting and all material-handling equipment.
P243 - Take action to prevent static discharges.

Response : P336 + P315 - Thaw frosted parts with lukewarm water. Do not rub affected area. Get immediate medical advice or attention.
P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
P381 - In case of leakage, eliminate all ignition sources.

Storage : P410 + P403 - Protect from sunlight. Store in a well-ventilated place.

Disposal : Not applicable.

Contains : Natural gas

Supplemental label elements : Not applicable.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

2.3 Other hazards

PBT	P	B	T	vPvB	vP	vB
No	N/A	N/A	No	N/A	N/A	N/A



Other hazards which do not result in classification : May form explosive mixtures with air.
The vapor/gas is heavier than air and will spread along the ground.
The gas can cause asphyxiation without warning by replacing the oxygen in the air.
Can cause burns similar to frostbite.

SECTION 3: Composition/information on ingredients**3.1 Substances** : UVCB

Product/substance	Identifiers	% (w/w)	Classification	Specific Conc. Limits, M-factors and ATEs	Type
Natural gas	EC: 232-343-9 CAS: 8006-14-2	100	Flam. Gas 1A, H220 Press. Gas (Ref. Liq.), H281 See Section 16 for the full text of the H statements declared above.	-	[1]

Additional information : Natural gas, gaseous hydrocarbon C1-C4

Reportable hazardous constituent(s) contained in UVCB and/or multi-constituent substance(s) complying with the classification criteria and/or with an exposure limit (OEL)

Product/substance	Identifiers	% (w/w)	Regulation (EC) No. 1272/2008 [CLP]	Specific Conc. Limits, M-factors and ATEs
methane	EC: 200-812-7 CAS: 74-82-8	>80	Flam. Gas 1A, H220 Press. Gas (Comp.), H280	-
ethane	EC: 200-814-8 CAS: 74-84-0	<10	Flam. Gas 1A, H220 Press. Gas (Comp.), H280	-
butane	EC: 203-448-7 CAS: 106-97-8	<5	Flam. Gas 1A, H220 Press. Gas (Comp.), H280	-
propane	EC: 200-827-9 CAS: 74-98-6	<5	Flam. Gas 1A, H220 Press. Gas (Comp.), H280	-

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.

Type

[1] Constituent

SECTION 4: First aid measures**4.1 Description of first aid measures**

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
If frostbite occurs, get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention if adverse health effects persist or are severe.

- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. To avoid the risk of static discharges and gas ignition, soak contaminated clothing thoroughly with water before removing it. Get medical attention if symptoms occur. In case of contact with liquid, warm frozen tissues slowly with lukewarm water and get medical attention. Do not rub affected area. Wash clothing before reuse. Clean shoes thoroughly before reuse. If frostbite occurs, get medical attention. Do not rub affected area. High pressure injection of the products under the skin may have very serious consequences even though no symptom or injury may be apparent. In this case, the casualty should be sent immediately to hospital.
- Ingestion** : Get medical attention if adverse health effects persist or are severe. Ingestion of liquid can cause burns similar to frostbite. If frostbite occurs, get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. As this product rapidly becomes a gas when released, refer to the inhalation section.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. At very high concentrations, can displace the normal air and cause suffocation from lack of oxygen.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

- Eye contact** : State Gaseous: May cause slight transient irritation.
State liquid: Can cause burns similar to frostbite.
- Inhalation** : May cause respiratory irritation.
High vapor concentrations can cause headaches, dizziness, drowsiness and nausea and may lead to unconsciousness.
- Skin contact** : State liquid: Can cause burns similar to frostbite.
- Ingestion** : Not an expected route of exposure.

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO₂, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

5.2 Special hazards arising from the substance or mixture

- Hazards from the substance or mixture** : Contains gas under pressure. Contains refrigerated gas. Extremely flammable gas. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.
- Hazardous combustion products** : Decomposition products may include the following materials:
Carbon dioxide (CO₂).
carbon monoxide
Toxic gases
Aldehyde.
Soot



5.3 Advice for firefighters

- Special protective actions for fire-fighters** : If involved in fire, shut off flow immediately if it can be done without risk. If this is impossible, withdraw from area and allow fire to burn. Fight fire from protected location or maximum possible distance. Eliminate all ignition sources if safe to do so.
Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Contact supplier immediately for specialist advice.
Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents. For incidents involving large quantities, thermally insulated undergarments and thick textile or leather gloves should be worn.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : Stop leak if without risk.
Accidental releases pose a serious fire or explosion hazard. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Put on appropriate personal protective equipment.
- For emergency responders** : If the situation cannot be completely assessed, or if an oxygen deficiency is possible, only SCBA's should be used.
If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

- Ensure emergency procedures to deal with accidental gas releases are in place to avoid contamination of the environment. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and cleaning up

- Small spill** : Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment.
- Large spill** : Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment.

6.4 Reference to other sections

- See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling



- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Contains gas under pressure. Contains refrigerated gas. Do not get in eyes or on skin or clothing. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Do not puncture or incinerate container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

All the electric installations, including the lighting of rooms that may contain this product, must be adapted to the risk area, in compliance with the European ATEX directives.

Store in accordance with local regulations. Store in a segregated and approved area. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Eliminate all ignition sources. Keep container tightly closed and sealed until ready for use. See Section 10 for incompatible materials before handling or use.

Seveso Directive - Reporting thresholds

Named substances

Name	Notification and MAPP threshold	Safety report threshold
Liquefied flammable gases, Category 1 or 2 (including LPG) and natural gas	50 tonne	200 tonne

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

No exposure limit value known.

Reportable hazardous constituent(s) contained in UVCB and/or multi-constituent substance(s) complying with the classification criteria and/or with an exposure limit (OEL)

Product/substance	Exposure limit values
butane	Ministry of Labor (France, 5/2021). Notes: Permissible limit values (circulars) TWA: 800 ppm 8 hours. TWA: 1900 mg/m ³ 8 hours.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment

of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Advisory OEL : No known significant effects or critical hazards.

DNELs/DMELs

No DNELs/DMELs available.

PNECs

No PNECs available.

8.2 Exposure controls

Appropriate engineering controls : Use only with adequate ventilation. Use explosion-proof ventilation equipment. Before entering storage tanks and commencing any operation in a confined area, check the atmosphere for oxygen content and flammability. Wear suitable protective clothing, gloves and eye/face protection. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Cold insulating gloves, Standard: EN 511
Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : None under normal use conditions. If the situation cannot be completely assessed, or if an oxygen deficiency is possible, only SCBA's should be used. In case of inadequate ventilation wear respiratory protection: organic vapor filter (Type AX).
In an emergency or for exceptional short-lasting jobs in an atmosphere polluted by the product, it is necessary to wear protective respiratory equipment. (powered air)

Thermal hazards : If there is a risk of contact with the liquid, all protective equipment worn should be suitable for use with extremely low temperature materials.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature (20°C / 68°F) and pressure (1013 hPa) unless otherwise indicated

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Gas. [Liquefied gas.]

Color : Colorless.

Odor : Odorless.

Odor threshold : Not available.

pH : Not applicable. Product is a gas.

Melting point/freezing point : -183°C

Initial boiling point and boiling range : -166 to -157°C

Flash point : Not applicable.

Evaporation rate : Not available.

Flammability : Extremely flammable in the presence of the following materials or conditions: open flames, sparks and static discharge.

Lower and upper explosion limit : Lower: 5%
Upper: 15%

Vapor pressure : 600 to 39000 kPa

Vapor density : Not available.

Relative density : 0.54 to 0.66

Density : 0.54 to 0.66 g/cm³ [0°C]

Solubility(ies) :

Media	Result
water	Not soluble

Solubility in water : 0.024 to 0.061 g/l

Miscible with water : No.

Partition coefficient: n-octanol/ water : ≤2.8

Auto-ignition temperature : >400°C

Decomposition temperature : Not available.

Viscosity : Not applicable.

Particle characteristics

Median particle size : Not applicable.

9.2 Other information

No other relevant physical and chemical parameters for the safe use of the product

SECTION 10: Stability and reactivity

- 10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- 10.2 Chemical stability** : Stable under recommended storage and handling conditions (see Section 7).
- 10.3 Possibility of hazardous reactions** : Rapid Phase Transition when exposed to water (RPT)
- 10.4 Conditions to avoid** : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
- 10.5 Incompatible materials** : Strong oxidizing agents
Halogens
- 10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

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

Acute toxicity

Product/substance	Result	Species	Dose	Exposure	Test
Natural gas	LC50 Inhalation Dusts and mists	Rat	>800000 ppm	0.25 hours	-
	LC50 Inhalation Vapor	Rat	40.2 mg/l	1 hours	-

Conclusion/Summary : Based on available data, the classification criteria are not met.

Acute toxicity estimates

Product/substance	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
Natural gas	N/A	N/A	N/A	20.1	N/A

Irritation/Corrosion

Conclusion/Summary

- Skin** : Based on available data, the classification criteria are not met.
- Eyes** : Based on available data, the classification criteria are not met.
- Respiratory** : Based on available data, the classification criteria are not met.

Sensitization

Conclusion/Summary

- Skin** : Based on available data, the classification criteria are not met.
- Respiratory** : Based on available data, the classification criteria are not met.

Mutagenicity

Conclusion/Summary

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

Carcinogenicity

Conclusion/Summary

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

**Reproductive toxicity**

Conclusion/Summary : Based on available data, the classification criteria are not met.

Teratogenicity

Conclusion/Summary : Based on available data, the classification criteria are not met.

Specific target organ toxicity (single exposure)

Conclusion/Summary : Based on available data, the classification criteria are not met.

Specific target organ toxicity (repeated exposure)

Conclusion/Summary : Based on available data, the classification criteria are not met.

Aspiration hazard

Conclusion/Summary : Based on available data, the classification criteria are not met.

Information on the likely routes of exposure : Not available.

Potential acute health effects

- Eye contact** : Extremely cold material. Liquid can cause burns similar to frostbite.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Extremely cold material. Dermal contact with rapidly evaporating liquid could result in freezing of the tissues or frostbite.
- Ingestion** : Ingestion of liquid can cause burns similar to frostbite.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : State Gaseous: May cause slight transient irritation.
State liquid: Can cause burns similar to frostbite.
- Inhalation** : May cause respiratory irritation.
High vapor concentrations can cause headaches, dizziness, drowsiness and nausea and may lead to unconsciousness.
- Skin contact** : State liquid: Can cause burns similar to frostbite.
- Ingestion** : Not an expected route of exposure.

Delayed and immediate effects and also chronic effects from short and long term exposure**Short term exposure**

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Potential chronic health effects

Not available.

- Conclusion/Summary** : Not available.
- General** : No known significant effects or critical hazards.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Reproductive toxicity** : No known significant effects or critical hazards.

11.2 Information on other hazards



11.2.1 Endocrine disrupting properties

This product does not contain any substance present at a concentration equal to or greater than 0.1% by mass, included in the list drawn up in accordance with article 59, paragraph 1 of the REACH Regulation, due to its endocrine disrupting properties, or a substance known to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation 2018/605.

11.2.2 Other information

Not available.

SECTION 12: Ecological information

12.1 Toxicity

Conclusion/Summary : Not available

12.2 Persistence and degradability

Conclusion/Summary : Not available.

Product/substance	Aquatic half-life	Photolysis	Biodegradability
Natural gas	-	-	Not readily

12.3 Bioaccumulative potential

Product/substance	LogK _{ow}	BCF	Potential
Natural gas	≤2.8	-	low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Not available.

Mobility in soil : Due to its high volatility, this gas is unlikely to generate soil or water pollution. Air Released into the atmosphere, constituents are rapidly diluted and undergo photodegradation

12.5 Results of PBT and vPvB assessment

Product/substance	PBT	P	B	T	vPvB	vP	vB
Natural gas	No	N/A	N/A	No	N/A	N/A	N/A

12.6 Endocrine disrupting properties

This product does not contain any substance present at a concentration equal to or greater than 0.1% by mass, included in the list drawn up in accordance with article 59, paragraph 1 of the REACH Regulation, due to its endocrine disrupting properties, or a substance known to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation 2018/605.

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.





Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

Packaging

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Empty pressure vessels should be returned to the supplier. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	ICAO/IATA
14.1 UN number or ID number	UN1972	UN1972	UN1972	UN1972
14.2 UN proper shipping name	METHANE, REFRIGERATED LIQUID	METHANE, REFRIGERATED LIQUID	METHANE, REFRIGERATED LIQUID	Methane, refrigerated liquid
14.3 Transport hazard class(es)	2 	2 	2.1 	2.1 
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	No.	No.	No.

Additional information

ADR/RID : **Hazard identification number** 223
Limited quantity 0
Special provisions 392
Tunnel code (B/D)

ADN : **Special provisions** 392

IMDG : **Emergency schedules** _F-D_, S-U

ICAO/IATA : **Quantity limitation** Passenger and Cargo Aircraft: Forbidden. Packaging instructions: Forbidden. Cargo Aircraft Only: Forbidden. Packaging instructions: Forbidden. Limited Quantities - Passenger Aircraft: Forbidden. Packaging instructions: Forbidden.



14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Maritime transport in bulk according to IMO instruments : Not available.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorization

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Other EU regulations

Take note of Dir 94/33/EC on the protection of young people at work.

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

DIRECTIVE 2008/68/EC related on the inland transport of dangerous goods

Industrial emissions (integrated pollution prevention and control) - Air : Not listed

Industrial emissions (integrated pollution prevention and control) - Water : Not listed

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Persistent Organic Pollutants

Not listed.

Seveso Directive

This product is controlled under the Seveso Directive.

Named substances

Name
Liquefied flammable gases, Category 1 or 2 (including LPG) and natural gas

National regulations

Social Security Code, Articles L 461-1 to L 461-7 : Natural gas

RG 84



- Classified installations for environmental protection** : Environmental Code, Book V Prevention of Pollution, Risks and Nuisance, Title I: Classified Installations for Environmental Protection, Chapter 1 General Provisions; Section 2: Nomenclature of Classified Installations (Article R511-9 to R511-10): ICPE 1413, 1414
- Reinforced medical surveillance** : Decree n ° 2012-135 of January 30, 2012 relating to the organization of occupational medicine: applicable
- Other regulations** : Art R4412-1 to R4412-57 of the Labor Code relating to the provisions applicable to dangerous chemical agents.
Art R. 4624-18 of the Labor Code relating to young workers.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

LU - Luxembourg prohibited chemicals in the workplace

Not listed.


Inventory list

- Australia inventory (AIC)** : This material is listed or exempted.
- Canada inventory (DSL/NDSL)** : This material is listed or exempted.
- China inventory (IECSC)** : This material is listed or exempted.
- Europe inventory (EC)** : This material is listed or exempted.
- Japan inventory** : **Japan inventory (CSCL)**: Not determined.
Japan inventory (ISHL): Not determined.
- New Zealand Inventory of Chemicals (NZIoC)** : This material is listed or exempted.
- Philippines inventory (PICCS)** : Not determined.
- Korea inventory (KECI)** : This material is listed or exempted.
- Taiwan Chemical Substances Inventory (TCSI)** : This material is listed or exempted.
- Thailand inventory** : Not determined.
- Turkey inventory** : Not determined.
- United States inventory (TSCA 8b)** : This material is listed or exempted.
- Vietnam inventory** : This material is listed or exempted.


The information stated in this section relates solely to the conformity of the chemical product with the countries Inventories. The information used to confirm the inventory status of this product may be based on additional data to the chemical composition shown in Section 3. Other regulations may apply for importation or marketing authorizations.

15.2 Chemical Safety Assessment : Not available.


SECTION 16: Other information

 Indicates information that has changed from previously issued version.


Abbreviations and acronyms

: ATE = Acute Toxicity Estimate
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
 DNEL = Derived No Effect Level
 DMEL = Derived Minimal Effect Level
 EUH statement = CLP-specific Hazard statement
 N/A = Not available
 PBT = Persistent, Bioaccumulative and Toxic
 vPvB = Very Persistent and Very Bioaccumulative
 PNEC = Predicted No Effect Concentration
 LC50 = Median lethal concentration
 LD50 = Median lethal dose
 OEL = Occupational Exposure Limit
 VOC = Volatile Organic Compound
 UVCB Substance of unknown or Variable composition, Complex reaction products or Biological material
 NOEC No Observed Effect Concentration
 QSAR = Quantitative Structure–Activity Relationship
 CF = Bioconcentration Factor
 LogPow = logarithm of the octanol/water partition coefficient
 TWA = Time Weight Average

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
 Flam. Gas 1A, H220 Press. Gas (Ref. Liq.), H281	Expert judgment Expert judgment

Full text of abbreviated H statements

 H220 H281	Extremely flammable gas. Contains refrigerated gas; may cause cryogenic burns or injury.
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Full text of classifications [CLP/GHS]

 Flam. Gas 1A Press. Gas (Ref. Liq.)	FLAMMABLE GASES - Category 1A GASES UNDER PRESSURE - Refrigerated liquefied gas
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Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.