GAS Nhien Lieu Xanh
Master Compliance, Master Safety!

SAFETY GUIDANCE
LIQUEFIED NATURAL GAS (LNG)

1. Identification of the chemical and supplier information	
Name	Liquefied natural gas (LNG) CAS 74-82-8 UN 1972 EC 200-812-7
Importer / distributor	Công ty TNHH Nhiên Liệu Xanh No. 13B, Quarter 1, Bien Hoa Ward, Dong Nai City, Viet Nam
Emergency contact	Công ty TNHH Nhiên Liệu Xanh No. 13B, Quarter 1, Bien Hoa Ward, Dong Nai City, Viet Nam Tel: 02.513.954.124 Distributor: Cong ty Co phan Kho Cang Cai Mep
Intended use	Intended use: fuel for industrial, transport and domestic combustion. Restrictions: liquid LNG causes frostbite on direct contact; LNG vapour is highly flammable and explosive; warm vapour is lighter than air and may travel far; if it meets an ignition source it may flash back to the leak.

2. Hazard identification

1. GHS classification
Extremely flammable gas, Category 1; gas under pressure — refrigerated liquefied gas

2. Hazard warning:
- Extremely flammable gas
- Contains refrigerated gas; may cause cryogenic burns or injury

3. Precautionary guidance
- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
- No smoking.
- Leaking-gas fire: do not extinguish unless the leak can be stopped safely.

4. Other hazards
- Signal word: DANGER.
- Liquid LNG / cold vapour causes frostbite.
- LNG vapour at ambient temperature is lighter than air; cold vapour near a pool may stay low, then dilute and rise.
- High concentrations displace oxygen and cause asphyxiation.

3. Composition of substances

Name of hazardous constituent	CAS No.	Chemical formula	Content (% by weight)
Methane	74-82-8	CH4	85 - 100%
Ethane	74-84-0	C2H6	1 - 10%
Propane	74-98-6	C3H8	1 – 5%
Butane	106-97-8	C4H10	< 0.1%

4. First-aid measures

Eyes	Move the casualty to a safe area. Rinse the eyes with clean water until the LNG is gone; if frostbitten, warm gradually with lukewarm water. Do not rub. Seek medical care immediately.
Skin	Frostbite — move outside; pour lukewarm water gently on the skin until the LNG is gone. Do not heat with flame, rub hard or blow hot air. Remove jewellery/clothing if not stuck to the skin. Seek medical care.
Inhalation	Rescuers must wear suitable respiratory protection. Move the casualty to fresh air. Keep warm and at rest. Not breathing: artificial respiration. Circulation stopped: CPR per current guidance. Seek medical care immediately. High concentrations displace oxygen and may cause sudden loss of consciousness.
Ingestion	No information on the source sheet. If unexpected contact occurs: seek medical care.

Note: Rescuers must have suitable PPE. Treat according to symptoms.

5. Measures in case of fire

Flammability classification	Extremely flammable gas, Category 1.
Products formed on combustion	CO2, CO; incomplete combustion may produce soot.
Agents causing fire and explosion	Heat, sparks, flames, static electricity, non-explosion-proof electrical or mechanical equipment.
Suitable extinguishing agents	Stop the leak if safe; do not extinguish an LNG fire unless the leak can be stopped. Small fires: dry powder,

	CO2, foam. Do not apply a direct water jet to burning LNG (increases vaporisation; may form ice). Use water only to cool adjacent equipment or structures. Allow the liquid to burn out once the source is isolated. Trained personnel only.
Special notes	Vapour may travel far to an ignition source and flash back to the leak. Do not extinguish until the leak can be stopped safely.
6. Prevention and emergency response	
LNG leak	- Isolate electrical power; close valves and isolate the leak point if safe; ban flames, cigarettes, mobile phones and switches in the vapour area. - Prioritise rescue; evacuate persons without assigned duties. - Do not enter a confined space until the atmosphere has been measured. Cold vapour may stay low near the pool. - Measure gas concentration before and while entering the area. - Cool tanks/equipment with water spray if they are heated. After the fire is out, if the leak continues: ventilate to dilute the vapour. Notify the fire service if control is lost. Distances follow the approved fire plan.
7. Use and storage	
Use	- Use only a closed, cold- and pressure-rated system with safety valves. Do not use in confined spaces. No eating, drinking, smoking or ordinary mobile phones in the area. Use non-sparking tools. Explosion-proof electrical equipment; earthing required. - Earth pipelines and equipment. Do not contact cold surfaces. Do not use plastic containers or LNG-incompatible materials. **Tank cleaning/entry: work permit; purge gas; ventilate; measure O2 and LEL. Do not enter without breathing apparatus unless LEL is less than 1% of the lower limit and O2 is at least 20% by volume (source sheet). A standby person outside must have breathing apparatus.** Note: Measure gas continuously throughout the work. Do not repair a pipeline or tank that is still under pressure.
Safe storage measures	**Containment equipment:** - Store LNG only in dedicated equipment of the correct type; comply with QCVN 19:2022/BCT (onshore LNG storage) and the applicable pressure/cryogenic regulations. - Tanks must have pressure-relief valves. Transfer piping: over-temperature and over-pressure protection; liquid-export lines fitted with a check valve. **Environment and storage area:** - Dedicated warehouse, well ventilated; leak control and regular gas monitoring. - Provide fire-fighting equipment in the required quantity and type, no-flame signs and fire-fighting standing orders. - No flames, smoking or sparks. Explosion-proof electrical equipment suitable for the hazardous area. - Do not use deformed or damaged equipment. Keep away from strong oxidisers. - **Provide on-site fire-fighting means and a gas-leak warning system.** - Hazard warning signs, no-flame signs and chemical safety site rules.
8. Exposure control / Personal protective equipment	
Exposure control	Limit exposure: monitor gas concentration to detect leaks. Work permit. Isolate and purge before repair; return the system to service with inert gas to remove oxygen. Avoid inhaling vapour and avoid contact of liquid LNG with skin, eyes or clothing.
Personal protective equipment	1. PPE for normal work: Safety glasses with a face shield; chemical- and cold-resistant gloves; safety shoes and apron. Do not use a dust mask in an oxygen-deficient atmosphere. 2. In an emergency: as above, plus respiratory protection suitable for oxygen-deficient or vapour atmospheres (do not use a dust mask). Eyewash point and first-aid cabinet on site. No eating, drinking or smoking in the work area.

9. Physico-chemical properties			
Physical state	Refrigerated liquid (vaporises at ambient temperature and pressure)	**Boiling point (°C)**	−162
Colour	Colourless	**Melting point (°C)**	No information available
Odour	Odourless	**Density**	450–500 kg/m³ (15°C)
Vapour pressure	900 kPa (source sheet)	**Auto-ignition temperature (°C)**	537
Vapour density (air = 1)	0.58 (standard temperature and	**Upper explosive limit**	10% by volume (mixture with air)

	pressure)		
Solubility in water	No information available	**Lower explosive limit**	2.2% by volume
pH	No information available	**Evaporation rate**	No information available
Flash point (°C)	−187		

10. Stability and reactivity

- Stable at ambient temperature and pressure when stored in proper cryogenic equipment. Does not polymerise. Does not decompose at ambient temperature.
- Avoid: electrical sparks, static electricity, high temperature, impact and friction that create sparks.
- Incompatible: strong oxidisers; materials not rated for pressure or low temperature; plastics / LNG-incompatible materials. Combustion: CO2, water, heat; incomplete combustion produces CO.

11. Ecology

- LNG evaporates quickly from soil and water; low persistence; not bioaccumulative according to the source sheet.
- Do not release large uncontrolled quantities. Do not state “not environmentally toxic” when the source sheet has no valid test data.

12. Disposal

- Do not discharge directly to the environment. Disposal: controlled burning on a flare system designed for LNG.
- Empty or damaged tanks/pipelines still contain residual flammable gas.
- Do not cut, weld or drill until the gas has been cleaned out and the system inerted per procedure.
- Transfer to a competent unit or return to the supplier.
- Waste (if any) shall be managed under the hazardous-waste and chemical laws currently in force.

13. Transport

Name of regulation	UN No.	Shipping name	Class, division of dangerous goods	Packing specification	Transport label
VN regulations: Decree No. 34/2024/ND-CP and Decree No. 161/2024/ND-CP (transport of dangerous goods)	1972	METHANE, REFRIGERATED LIQUID (liquefied natural gas)	2.1 – flammable gas	Packing group not applicable	Flammable gas
International regulations, EU, USA…	1972	METHANE, REFRIGERATED LIQUID (liquefied natural gas)	2.1	Packing group not applicable	Flammable gas

14. Legal regulations

- Law on Chemicals No. 69/2025/QH15 dated 14 June 2025 of the National Assembly.
- Decree No. 26/2026/ND-CP dated 17 January 2026 of the Government detailing the Law on Chemicals on management of chemical activities and hazardous chemicals in products and goods.
- Circular No. 01/2026/TT-BCT dated 17 January 2026 of the Minister of Industry and Trade detailing the Law on Chemicals and Decree No. 26/2026/ND-CP.
- Circular No. 48/2020/TT-BCT dated 21 December 2020 promulgating QCVN 05A:2020/BCT; Circular No. 19/2024/TT-BCT dated 10 October 2024 promulgating Amendment 1:2024 to QCVN 05A:2020/BCT.
- Decree No. 34/2024/ND-CP dated 31 March 2024 of the Government (road and inland waterway); Decree No. 161/2024/ND-CP dated 18 December 2024 of the Government (road; amending and supplementing Decree No. 34/2024).
- Circular No. 40/2022/TT-BCT dated 30 December 2022 promulgating QCVN 19:2022/BCT on safety of onshore LNG storage.

15. Other information

First compilation from the source sheet: 09/09/2026.

Issue: 01

Organisation/person who drafted: Cong ty TNHH Nhien Lieu Xanh

References (does not replace the original safety data sheet of the manufacturer/supplier):
- Source sheet “Nhien Lieu Xanh_LNG_MSDS”, dated 23/07/2026.
- Circular No. 01/2026/TT-BCT.
- QCVN 19:2022/BCT; QCVN 05A:2020/BCT.
- Decree No. 34/2024/ND-CP and Decree No. 161/2024/ND-CP.
- Circular No. 40/2022/TT-BCT.
- Decree No. 26/2026/ND-CP.

- Drafting note: do not use toxicology figures or state “not environmentally toxic” when the source sheet has no valid test.

Statement of Cong ty TNHH Nhien Lieu Xanh:
The information in the SAFETY GUIDANCE – LIQUEFIED NATURAL GAS (LNG) (note: it does not replace the original safety data sheet of the manufacturer/supplier) has been compiled from the source sheet dated 09/09/2026 and the regulations in force. This document supports the prevention of risks during storage, use and emergency response.

LNG may present additional risks depending on conditions of use and the level of exposure (frostbite, asphyxiation, flashback). Workers shall follow this guidance and the original sheet accompanying the consignment.