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

1.1. Product identifier

Trade name: Automotive Liquefied Petroleum Gas
Name of the Substance: Petroleum gases, liquefied, sweetened
EC No.: 270-705-8
CAS No.: 68476-86-8
Index No.: 649-203-00-1
REACH Registration No.: 01-2119490743-31-0002

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

Relevant identified uses: liquefied gaseous fuel.
Uses advised against: no other use is recommended.

1.3. Details of the supplier of the safety data sheet

Manufacturer:
Public Company *ORLEN Lietuva*
Juodeikiai, LT-89453 Mažeikiai District, Lithuania
Tel.: +370 443 92121
E-mail address: post@orlenlietuva.lt

1.4. Emergency telephone number

Poison Information Bureau. In case of poisoning (24/7): +370 52 362052 or +370 687 53378
General helpline number in Europe (24/7): 112

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 (CLP)
Flam. Gas 1A, H220
Liquefied gas, H280
For the full text of Hazard Statements: see SECTION 16.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 (CLP)
Signal word: DANGER
Hazard pictogram:

GHS02 GHS04

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, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P377: Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
P381: In case of leakage eliminate all ignition sources.
P410+P403: Protect from sunlight. Store in a well-ventilated place.

2.3. Other hazards

Does not contain any substances assessed to be a PBT or a vPvB or having endocrine disrupting properties with concentration equal to or greater than 0.1 %.
Product is extremely flammable liquefied hydrocarbon compound which at ambient temperature may form explosive hydrocarbon mixtures with air.
If inhaled, product hydrocarbons have narcotic effect leading to nervous system and heart disorders; irritating to respiratory tract and eyes. Inhalation of large gas concentrations may lead to unconsciousness or suffocation in the short run due to oxygen deficiency. After contact with skin or eyes liquefied gas may cause frostbite due to intensive evaporation.
Formation of toxic compounds with other materials in water and air at ambient temperatures is not characteristic to product. Accidental release may produce short-term soil, water and atmosphere contamination and significant reduction of oxygen concentration in ambient air, especially in a confined spaces.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Trade name: Automotive Liquefied Petroleum Gas

Liquefied petroleum gas, mixture of C_3–C_4 hydrocarbons containing small amounts of C_2. Product contains less than 0.1 % mass of 1,3-butadiene.

Substance Name	Concentration, %	Labelling according to CLP Regulation
Petroleum gases, liquefied, sweetened EC No.: 270-705-8 CAS No.: 68476-86-8 Index No.: 649-203-00-1 REACH Registration No.: 01-2119490743-31-0002	100	Flam. Gas 1A, H220 Liquefied gas, H280
Methanol EC Nr.: 200-659-6 CAS Nr.: 67-56-1	0 – 0.02	Flam. Liquid 2, H225 Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 3, H331 STOT SE 1, H370 (Optic nerve (nervus opticus), central nervous system)
Additives	0 – 0.002	

Product may contain substances for which workplace exposure limit value is established.
Occupational exposure limits, if available, are listed in SECTION 8.
For full text of H-statements, see SECTION 16.

3.2. Mixtures

Not applicable.

SECTION 4: FIRST AID MEASURES

Product-Specific hazards

Extremely flammable liquefied gas. An asphyxiant at high concentrations – oxygen depletion can be fatal. Contact with liquefied gas may result in frostbite.

4.1. Description of first aid measures

Before attempting to rescue casualties, isolate area from all potential sources of ignition including disconnecting electrical supply.

Ensure adequate ventilation and check that a safe, breathable atmosphere is present before entry into confined spaces. Take care to self-protect to avoid poisoning – use approved self-contained positive pressure air supplied breathing apparatus with a full face piece.
Move contaminated patient(s) out of the dangerous area. Seek medical assistance – show the material safety data sheet or label if possible.

Inhalation

Move to fresh air. Do not leave the victim unattended. Keep patient warm and at rest. If unconscious place in recovery position.
Seek immediate medical attention.
If breathing is difficult, give oxygen if possible, or assisted ventilation. In the event of cardiac arrest, (no pulse), apply cardiopulmonary resuscitation.

Skin Contact

Do not remove clothing that adheres due to freezing. Flush affected area with plenty of water. Continue for at least 15 minutes. If there are signs of frostbite, (blanching or redness of skin or burning or tingling sensation), do not rub, massage or compress the affected area. Send the casualty immediately to hospital.

Eye Contact

Remove any contact lenses. Flush eyes with water thoroughly and continuously for at least 15 minutes. Keep eye wide open while rinsing.
If there are signs of frostbite, pain, swelling, lachrymation or photophobia persists, the casualty should be seen in a specialist health care facility.

Ingestion

Not considered a likely route of exposure – frostbite to the lips and mouth may occur if in contact with the liquid.

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

Inhalation of vapours to high concentrations may cause asphyxiation. Skin and eye contact with product in liquid form may cause frostbite.

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

Asphyxiant gas at normal temperature and pressure – there is no specific antidote. If affected by liquid, administer frostbite treatment.

SECTION 5: FIREFIGHTING MEASURES

Flammability

Product is extremely flammable; it may form explosive mixtures with air. Product is transported, stored and handled at temperatures higher than its flash point. Avoid all open and potential sources of ignition.

5.1. Extinguishing media

Suitable extinguishing media:

Large fire:
- Water spray,
- Water fog (specifically trained personnel only),
- Foam (specifically trained personnel only),

Small fire:
- Carbon dioxide,
- Dry chemical powder,
- Dry sand,
- Fire fighting foam.

Unsuitable extinguishing media:

Do not use direct water jets on the burning product.
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

Combustion Products

Incomplete combustion is likely to give rise to carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

Specific Hazards

Where possible stop the flow of gas, and if safe to do so. If the flow cannot be stopped allow the fire to burn out, whilst cooling containers, equipment and surroundings with a water spray.

Product in gaseous phase is heavier than air, therefore explosive gas and air mixtures can accumulate in low non-ventilated areas. Vapours may travel long distances to ignition sources and flash back. Considerable amounts of toxic gas (CO, CO_2) may be emitted in case of fire.

Cylinders or other containment vessels may explode under fire conditions – use water spray to cool unopened containers.

Do not allow run-off from fire fighting to enter drains or water courses – may cause explosion hazard in drains and may reignite.

5.3. Advice for firefighters

In case of a large fire or in confined or poorly ventilated spaces wear full fire resistant protective clothing and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode in addition to standard fire fighting gear.

Cool containers with flooding quantities of water until well after fire is out.

Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.

ALWAYS stay away from tanks engulfed in fire.

For massive fire, use unmanned hose holders or monitor nozzles.

If it is impossible to put out the fire, withdraw from area and let fire burn.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Stop leak if safe to do so. Avoid direct contact with released material and breathing vapours. Stay upwind. Keep non-involved personnel away from the area of spillage. Alert emergency personnel. Enter area only if strictly necessary. A combustible gas detector can be used to check for flammable gas or vapours. Eliminate all ignition sources if safe to do so (e.g. electricity, sparks, fires, flares, etc.).

If required, notify relevant authorities according to applicable regulations.

6.1.2. For emergency responders

Wear normal personal protective equipment: antistatic working clothes, work gloves, work helmet, antistatic non-skid safety shoes or boots, goggles or face shield, if splashes or contact with eyes is possible or anticipated. Respiratory protection: Self-Contained Breathing Apparatus (SCBA), unless the atmosphere is proved to be safe.

Spillages of material generate large volumes of extremely flammable gas. As product flash point is very low any spillage or leak of the material causes serious fire and/or explosion hazard. Gas is heavier than air and will accumulate in low areas or confined spaces.

Cylinders or other containment vessels may explode under fire conditions - use water spray to cool unopened containers.

Do not allow run-off from fire fighting to enter drains or water courses – may cause explosion hazard in drains and may reignite.

In case of release of considerable amounts of product, extensive amounts of explosive vapours heavier than air are formed which may travel long distances to the sources of ignition, therefore immediately inform the downwind area.

6.2. Environmental precautions

Spillages onto Land

Prevent further leakage or spillage if safe to do so. Prevent spillage from entering drains or any place where accumulation may occur. Ensure adequate ventilation, especially in confined areas.

Spillages on water or at sea

Prevent further leakage or spillage if safe to do so. Spillages of liquid product in the water will likely result in a quick and complete vaporization of the product. Isolate the area and prevent fire/explosion hazard for ships and other structures, taking into account wind direction and speed, until the material is completely dispersed.

If the spillage contaminates rivers, lakes or drains inform respective authorities.

6.3. Methods and material for containment and cleaning up

Spillages onto Land

Contain spillage – ventilate area and allow to evaporate.

Spillages on Water or at Sea

Contain spillage –allow to evaporate.

Additional information

Spillages of liquid product will create a fire hazard and form an explosive atmosphere. Large spillage should be smothered with foam to reduce product evaporation and the risk of explosion or ignition. Ensure all equipment is non-sparking or electrically bonded.

6.4. Reference to other sections

See SECTION 8 for Exposure controls/personal protection. See SECTION 13 for Disposal considerations.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Risk of explosive mixtures of vapour and air. Ensure that all relevant regulations regarding explosive atmospheres, and handling and storage facilities of flammable products, are followed. Proper mobile tanks should be used for product transportation. Prevent product spillage to sewage or water bodies while handling and storing.

Ensure safe systems of work or equivalent arrangements are in place to manage risks. Smoking, eating and drinking should be prohibited.

The vapour is heavier than air; beware of accumulation in pits and confined spaces.

To avoid frostbite do not touch cold fittings, equipment, cylinders and tanks with liquefied gas barehanded.

7.2. Conditions for safe storage, including any incompatibilities

Handling

During product transfer activities (loading and unloading of mobile tanks), there is a risk of static electrical discharge, therefore take precautionary measures against static electricity; use proper bonding and/or grounding. Handle only in areas away from potential ignition sources.

Use piping and equipment designed to withstand the pressures to be encountered. Use a check valve or other protective device to prevent reverse flow.

Consider technical advances and process upgrades (including automation) for the elimination of releases. Use only in well ventilated areas. Minimise exposure using measures such as closed systems, dedicated facilities and suitable general/local exhaust ventilation. Drain down systems and clear transfer lines prior to breaking containment.

Clean/flush equipment, where possible, prior to maintenance. Regularly inspect, test and maintain all control measures.

Cleaning, inspection and maintenance of the internal structure of storage tanks must be done only by properly equipped and qualified personnel as defined by national, local or company regulations.

Handle empty containers with care; gas, vapour residue may be flammable. Do not pressurise, cut, weld, braze, solder, drill, or grind on containers.

Avoid all sources of ignition, oxidising agents, chlorine and hydrogen chloride or hydrogen fluoride.

Dispose of rinse water in accordance with local and national regulations.

Storage

Store in specifically designated storage facilities located in a safe distance from potential sources of ignition.

To store only in supplied cylinders or approved vessels in a designated cool and well-ventilated place. Cylinders should be secured vertical – and only transported in a secure position in a well ventilated vehicle or hand truck. Cylinders which have been are opened must be carefully resealed and kept upright.
Containers, tanks and cylinders should be marked and warning boards should be placed as reference to safe equipment operation and product storage.
For maintenance work or conservation, emptied tanks should be purged, and blanketed with inert gas (i.e. nitrogen).

Recommended and Unsuitable Materials for Storage

Recommended materials: Use only receptables specifically permitteed for this product.
Unsuitable materials: some materials may be unsuitable for containers or container linings depending on the material specification and intended use. Compatibility should be checked with the manufacturer.

Container Advice

If the product is supplied in containers: Keep only in the original container or in a suitable container for this kind of product. Keep containers tightly closed and properly labelled. Protect from the sunlight.
Empty containers may contain flammable product residues. Do not weld, solder, drill, cut or incinerate empty containers, unless they have been properly cleaned.

Hygiene measures

Ensure that proper housekeeping measures are in place. Do not eat, drink or smoke while using this product. Wash the hands thoroughly after handling.

7.3. Specific end use(s)

Product is used as a liquefied gaseous fuel.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Substances for which occupational exposure limit values need to be controlled in the work environment:

Petroleum gases, liquefied, sweetened, CAS No.: 68476-86-8
Lithuanian Hygiene Standard HN 23:2011: not established.

Exposure Limits

Comply with established national occupational exposure limits. Where not established, the following short-term exposure limit is recommended – 1200 mg/m^3.

Biological limit values (BLV)

No biological limit value has been established for this substance.

Recommended monitoring procedures

Standard monitoring procedures must be followed.
Follow the monitoring measures applied in the country.

Derived No Effect Level DNEL

Derived No Effect Level (DNEL) or other conclusions of hazardous health effects:

Route of exposure	Type of exposure	Hazard assessment conclusion	Most sensitive endpoint
Workers			
Systemic effects			
Inhalation	Long term exposure	DMEL 2.21 mg/m³	Carcinogenicity
Inhalation	Acute/short term exposure	No-threshold effect and/or no dose-response information available	
Dermal	Long term exposure	DNEL 23.4 mg/kg bw/day	Carcinogenicity

Dermal	Acute/short term exposure	No data available: testing technically not feasible	
Local effects			
Inhalation	Long term exposure	No-threshold effect and/or no dose-response information available	
Inhalation	Acute/short term exposure	No-threshold effect and/or no dose-response information available	
Dermal	Long term exposure	No data available: testing technically not feasible	
Dermal	Acute/short term exposure	No data available: testing technically not feasible	
General Population			
Systemic effects			
Inhalation	Long term exposure	DNEL 0.066 mg/m³	Carcinogenicity
Inhalation	Acute/short term exposure	No-threshold effect and/or no dose-response information available	
Dermal	Long term exposure	No data available: testing technically not feasible	
Dermal	Acute/short term exposure	No data available: testing technically not feasible	
Oral	Long term exposure	No data available: testing technically not feasible	
Oral	Acute/short term exposure	No data available: testing technically not feasible	
Local effects			
Inhalation	Long term exposure	No-threshold effect and/or no dose-response information available	
Inhalation	Acute/short term exposure	No-threshold effect and/or no dose-response information available	
Dermal	Long term exposure	No data available: testing technically not feasible	
Dermal	Acute/short term exposure	No data available: testing technically not feasible	

Predicted No Effect Concentrations PNEC

PNEC is not determined or cannot be determined.

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits.

Ensure equipment is adequately earthed.

8.2.2. Individual protection measures, such as personal protective equipment

a) Eye/face protection

Wear safety glasses (e.g. acc. to EN 166).

b) Skin protection

i) Hand protection

Use protective gloves (tested and compliant to EN374). Check before use. Use only with clean hands. Contaminated gloves should be replaced. Always seek advice from glove suppliers for use, storage, care and replacement of gloves.

ii) Other

Wear protective clothes (according to EN 465) and other protection equipment. Protective clothing should be regularly inspected and maintained.

c) Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment.

NOTE. Filtering masks are hardly effective for protection against C_2, C_3 and C_4 hydrocarbons.

When working in vessel internals or other confined spaces **do not** use filtering masks but the special self-contained protective equipment. Respiratory protection equipment should be selected and used in accordance with the manufacturer's instructions and requirements established by the law.

d) Thermal hazards

Not required for normal conditions of use. Use dedicated equipment.

Hygiene measures

Comply with personal hygiene requirements. Wash hands before breaks and after work.

8.2.3. Environmental exposure controls

To ensure the compliance of ventilation and process equipment with requirements of environmental legislation, emissions of such equipment are subject to verification. In some cases vapour filterring installations or process equipment modifications may be necessary for the reduction of emission to allowed limit.

Avoid release to the environment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

a) Physical state	Clear liquid at storage pressure; Clear gas at ambient pressure
b) Colour	Colourless/clear
c) Odour	Unpleasant specific (merkaptane) odour due to its compounds
d) Melting point/freezing point	From minus 187 ℃ to minus 138 ℃
e) Boiling point or initial boiling point and boiling range	From minus 45 ℃ to 0 ℃
f) Flammability	Extremely flammable
g) Lower and upper explosion limit	1.8–15 %
h) Flash point	Below minus 60 ℃
i) Auto-ignition temperature	> 430 ℃
j) Decomposition temperature	Not applicable
k) pH	Not applicable
l) Kinematic viscosity	Not applicable
m) Solubility	24–60 mg/l (in water, at 20 ℃)
n) Partition coefficient n-octanol/water (log value)	1.09 to 2.8 (at 20 ℃)
o) Vapour pressure	400–1500 kPa (at 40 ℃)
p) Density and/or relative density	0.51–0.59 g/cm^3 (at 15 ℃)
q) Relative vapour density	1.4–2.0 (rel. to air)
r) Particle characteristics	Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Based on the available data, meets the CLP Regulation criteria as Category 1A, Flammable Gases.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

Stable at ambient temperature, hazardous polymerization reactions will not occur.

10.3. Possibility of hazardous reactions

Not expected to occur.
Vapors may form explosive mixture with air.
Note: This material is stable when properly handled and stored.
Hazardous reactions with incompatible materials.

10.4. Conditions to avoid

High ambient temperature.
Avoid electrostatic discharges and other ignition sources.
Keep away from heat/sparks/open flames/hot surfaces other ignition sources, and oxidizing conditions. No smoking.

10.5. Incompatible materials

Avoid contact with:
Strong oxidizing agents;
Halogenated hydrocarbons;
Nitrogen dioxide;
Fluoride compounds;
Halogens (bromine, chlorine, fluorine);
Metal catalysts.

10.6. Hazardous decomposition products

Partial decomposition produces fume, carbon dioxide, carbon monoxide and other harmful gases.
Concentration of toxic gas in a confined space or premises may reach a hazardous limit.

SECTION 11: TOXICOLOGICAL INFORMATION

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

a) acute toxicity
Does not meet the classification criteria based on available data (weight of evidence approach).
b) skin corrosion/irritation
Does not meet the classification criteria based on available data (weight of evidence approach).
c) serious eye damage/irritation
Does not meet the classification criteria based on available data (weight of evidence approach).
d) respiratory or skin sensitisation
Does not meet the classification criteria based on available data (weight of evidence approach).
e) germ cell mutagenicity
Does not meet the classification criteria based on available data (weight of evidence approach).
f) carcinogenicity
Does not meet the classification criteria based on available data (weight of evidence approach).
g) reproductive toxicity
Does not meet the classification criteria based on available data (OECD 422).
The NOAEC for reproductive toxicity (inhalation exposure for up to 42 days) was 16000 ppm, equivalent to 19678 mg/m^3.
The NOAEC for developmental toxicity (inhalation exposure for up to 42 days) was 16000 ppm, equivalent to 19678 mg/m^3.
h) STOT-single exposure
Does not meet the classification criteria based on available data (weight of evidence approach).

i) STOT-repeated exposure
Does not meet the classification criteria based on available data (OECD 422).
The NOAEC of ethane (inhalation, 28 day) was 16000 ppm, equivalent to 19678 mg/m^3.
j) aspiration hazard
Does not meet the classification criteria based on available data (weight of evidence approach).
Symptoms related to the physical, chemical and toxicological characteristics, delayed and immediate effects as well as chronic effects from short and long-term exposure
After contact with eyes product (liquid state) may cause serious damage, and after contact with skin may cause cold burns or frostbite. In case of strong frostbite, blisters and obstinate burns may occur. Frostbite of large skin surfaces may cause serious health problems.
If swallowed in small doses may irritate respiratory tract, cause dizziness, nausea, weakness, headache and drowsiness. Large vapour amounts may disturb nervous system, cardiac and respiratory functions; may deplete oxygen content in air breathed and cause hypoxia, therefore, person may suffocate or lose consciousness in a very short time.
Repeated or long-term exposure to product vapours may result in various disorders: hypotonia, hyper-tiredness, insomnia, neurosis. Long-term product vapour contact with skin may cause dermatitis.
Carcinogenic or mutagenic affects and bio-accumulative potential are not characteristic to product.

11.2 Information on other hazards

Endocrine disrupting properties
Not applicable. The substance is not considered an endocrine disruptor.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Based on available data does not meet the classification criteria as hazardous to the aquatic environment.
Calculated short-term toxic effects on fish LC_{50} (96 hours) for fish is estimated to range from 24.11 to 147.54 mg.l^{-1}in fresh water.
Calculated short-term toxic effects on aquatic invertebrates LC_{50} (96 hours) for invertebrates is estimated to range from 7.02 to 69.43 mg.l^{-1} in fresh water.
Calculated short-term toxic effects on aquatic algae and cyanobacteria EC_{50} for toxicity to aquatic algae is estimated to range from 7.71 to 16.5 mg.l-1in fresh water.

12.2. Persistence and degradability

The substance is considered readily biodegradable.

12.3. Bioaccumulative potential

The substance is a gaseous hydrocarbon UVCB. Standard tests for this endpoint are intended for single substances and are not appropriate for the risk assessment of this complex substance.

12.4. Mobility in soil

The substance is a gaseous hydrocarbon UVCB. Standard tests for this endpoint are intended for single substances and are not appropriate for the risk assessment of this complex substance.

12.5. Results of PBT and vPvB assessment

This substance does not contain constituents included in the SVHC candidate list as PBT/vPvB at concentrations above 0.1%.

12.6. Endocrine disrupting properties

This material does not contain any hydrocarbon structures that have been identified as having endocrine disrupting properties at concentrations equal to or greater than 0.1%.

12.7. Other adverse effects

No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste disposed of by decontamination in accordance with national requirements and local regulations or via a licensed waste disposal contractor. Note hazards arising from waste, and undertake required safety measures when handling it. Personnel involved in waste handling should wear personal protective equipment.
Empty storage tanks and railway tank cars may contain product residues; therefore, warning labels are to be retained as a guide to the safe tank handling and waste disposal. Empty containers represent a fire hazard as they may contain flammable product residues and vapour.
DO NOT weld, solder and repair in other ways the tanks without proper preparation.

SECTION 14: TRANSPORT INFORMATION

Labels

Land transport (ADR-RID)

14.1. UN number or ID number

1965

14.2. UN proper shipping name

UN 1965, HYDROCARBON GAS MIXTURE, LIQUEFIED, N.O.S. (Liquefied Petroleum Gas)

14.3. Transport hazard class(es)

2

14.4. Packing group

-

14.5. Environmental hazards

Not dangerous for the environment.

14.6. Special precautions for user

Hazard identification No.	23
Classification code	2F
Labels	2.1
Special provisions	274, 583, 652, 660, 662
Limited and excepted quantities	E0
Tunnel restriction code	2 (B/D)

For details on special provisions, see In chapter 3.3 of the ADR / RID regulation.
See also SECTION 7 of the SDS for handling and storage advice.

14.7. Maritime transport in bulk according to IMO instruments

Not applicable.

Inland waterway transport (UN RTDG/ADN(R))

14.1. UN number or ID number

1965

14.2. UN proper shipping name

UN 1965, HYDROCARBON GAS MIXTURE, LIQUEFIED, N.O.S. (Liquefied Petroleum Gas)

14.3. Transport hazard class(es)

2

14.4. Packing group

-

14.5. Environmental hazards

Not dangerous for the environment.

14.6. Special precautions for user

Classification code	2F
Labels	2.1
Special provisions	274

14.7. Maritime transport in bulk according to IMO instruments

Not applicable.

Marine transport (UN RTDG/IMDG)

14.1. UN number or ID number

1965

14.2. UN proper shipping name

UN 1965, HYDROCARBON GAS MIXTURE, LIQUEFIED, N.O.S. (Liquefied Petroleum Gas)

14.3. Transport hazard class(es)

2

14.4. Packing group

-

14.5. Environmental hazards

Not dangerous for the environment.

14.6. Special precautions for user

EmS number	F-D, S-U
Limited and excepted quantities	None
Special provisions	274

1965 is category E for stacking and separation

14.7. Maritime transport in bulk according to IMO instruments

Not applicable.

Air transport (UN RTDG/ICAO/IATA)

14.1. UN number or ID number

1965

14.2. UN proper shipping name

UN 1965, HYDROCARBON GAS MIXTURE, LIQUEFIED, N.O.S. (Liquefied Petroleum Gas)

14.3. Transport hazard class(es)

2

14.4. Packing group

-

14.5. Environmental hazards

Not dangerous for the environment.

14.6. Special precautions for user

Limited and excepted quantities	None

14.7. Maritime transport in bulk according to IMO instruments

Not applicable.

SECTION 15: REGULATORY INFORMATION

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

Relevant EU/international legislations:

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)
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 (CLP)
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 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
Council Regulation (EC) No 440/2008 of 30 May 2008 laying down test methods pursuant to Regulation (EC) No 1907/2006 (REACH)
Regulation (EU) 2016/425 of the European Parliament and of the Council of 9 March 2016 on personal protective equipment
Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste
Directive 2012/18/EU of the European Parliament and of the Council of 4 July 2012 on the control of major-accident hazards involving dangerous substances
Council Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work
Council Directive 89/391/EEC of 12 June 1989 on the introduction of measures to encourage improvements in the safety and health of workers at work
Council Directive 94/33/EC of 22 June 1994 on the protection of young people at work
European Agreement on the International Carriage of Dangerous Goods by Road / Waterways (ADR / MDG)
European Agreement on the International Carriage of Dangerous Goods by Air (IATA)
2000/532/EC: Commission Decision of 3 May 2000 replacing Decision 94/3/EC establishing a list of wastes
Regulation (EC) No 1907/2006 (REACH):
- SVHC (Candidate List of substances of very high concern for Authorisation): Not applicable
- REACH Annex XIV (Authorisation List): Not applicable
- REACH Annex XVII (Substances restricted under REACH): Not applicable

Regulation (EU) No 649/2012 (PIC): Not applicable
Regulation (EC) No 850/2004 (POT): Not applicable
Regulation (EC) No 1107/2009 (Plant protection products): Not applicable
Regulation (EU) No 528/2012 (Biocidal products): Not applicable
Regulation (EC) No 648/2004 (Detergents): Not applicable
Regulation (EC) No 1005/2009 (OSAM): Not applicable
Directive 2004/37/EC (related to exposure to carcinogens or mutagens at work): Not applicable

Note: Any subsequent updates, amendments and/or additions to the legislation should be duly considered. The list of legal acts is not exhaustive.

15.2. Chemical safety assessment

Chemical safety assessment has been conducted.

SECTION 16: OTHER INFORMATION

Revision of safety data sheet: 2022-11-03
Revised: all sections.
During the review of the SDS, the data presented were clarified and arranged in accordance with the European Commission Regulation (EU) No. 2020/878 requirements.

Abbreviations and acronyms:

ADN European Agreement concerning the International Carriage of Dangerous Goods by

	Inland Waterways
ADR	Agreement concerning the International Carriage of Dangerous Goods by Road
BLV	Biological limit values
CAS	Chemical Abstracts Service
CLP	Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures
DMEL	Derived Minimum Effect Level
DNEL	Derived No-Effect Level
EC	EINECS (European Inventory of Existing Commercial Chemical Substances) or ELINCS (European List of Notified Chemical Substances)
EL_{50}	Effective loading rate resulting in 50% effect
EmS	Emergency Response Procedures for Ships Carrying Dangerous Goods
EN	European standard of European Committee for Standardization
ErL_{50}	Loading Rate of Test Substance (in dilution water) which causes 50% reduction in algal growth rate
EU	European Union
IATA	International Air Transport Association
IBC	Intermediate bulk container
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
IMO	International Maritime Organization
JT	United Nations
LC_{50}	Lethal concentration for 50 % percent of test organisms
LD_{50}	Lethal dose for 50 % percent of test organisms (median lethal dose)
LL_{50}	Lethal load for 50 % of the test organisms
LR	Republic of Lithuania
LTEL	Long-term exposure limit value
NOAEC	No observed adverse effect concentration
NOAEL	No observed adverse effect level
NOEL	Non observed effect level
OECD	Organization for Economic Cooperation and Development
PBT	Persistent, bioaccumulative and toxic
PNEC	Predicted no-effect concentration
RCR	Risk characterization ratio
RID	The Regulation concerning the International Carriage of Dangerous Goods by Rail
RTDG	Recommendations on the Transport of Dangerous Goods
REACH	Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
STEL	Short-term exposure limit value
STOT	Specific target organ toxicity
UFI	Unique Formula Identifier
UVCB	Substance of unknown or variable composition, complex reaction products or biological materials
vPvB	very Persistent and very Bioaccumulative

Full text of Hazard Statements:
H220: Extremely flammable gas.
H280: Contains gas under pressure; may explode if heated.

Key literature references and sources for data
Registration documentation
Publicly available data from the national limit value databases of the European Chemicals Agency (ECHA), The GESTIS International Limit values Database.

Training advice

Employees/users must be trained/familiarized with the relevant safety information provided.

Do not use the product for any purposes other than indicated in the manufacturer's information. During such use the user may be exposed to unforeseen hazards.
Should you have any questions or doubts regarding SDS, its contents or any other concerns related to safety of the product, please contact us by e mail: post@orlenlietuva.lt

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