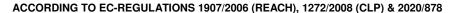
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SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product Name Petroleum gases, liquified

Product Description V8002a-LPG- Petroleum gases, liquified

 Trade Name
 LPG

 Product code
 LPG

 CAS No.
 68476-85-7

 EC No.
 270-704-2

 REACH Registration No.
 Not applicable

1.2 Relevant identified uses of the substance or mixture

and uses advised against

Identified Use(s)

Fuel for engines. Blend component.

Uses Advised Against

Anything other than the above.

1.3 Details of the supplier of the safety data sheet

Company Identification Vitol SA

Place des Bergues 3 1201 Geneva Switzerland +31 10 498 7200 +31 10 452 9545

Fax +31 10 452 9545
E-Mail (competent person) xrea ch@vitol.com

1.4 Emergency telephone number

Telephone

Emergency Phone No. +44 (0) 1235 239 670, 24/7
Languages spoken All official European languages.

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

2.1.1 Regulation (EC) No. 1272/2008 (CLP) Flam. Gas 1; H220

Gases under pressure; H280

Acute Tox. 4; H332 Muta. 1B; H340 Carc. 1A; H350 Repr. 1A; H360D STOT RE 2; H373

2.2 Label elements According to Regulation (EC) No. 1272/2008 (CLP)

Product Description V8002a-LPG- Petroleum gases, liquified

Hazard Pictogram(s)









Signal Word(s) DANGER

Hazard Statement(s) H220: Extremely flammable gas.

H280: Contains gas under pressure; may explode if heated.

H332: Harmful if inhaled.

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H340: May cause genetic defects.

H350: May cause cancer.

H360D: May damage the unborn child.

H373: May cause damage to organs through prolonged or repeated exposure:

Inhalation.

Supplemental information Not applicable.

Precautionary Statement(s) P201: Obtain special instructions before use.

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition

sources. No smoking.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P308+P313: IF exposed or concerned: Get medical advice/attention.

P377: Leaking gas fire: Do not extinguish, unless leak can be stopped safely.

P403: Store in a well-ventilated place.

2.3 Other hazards

The vapour is heavier than air; beware of pits and confined spaces. Vapour may create explosive atmosphere. The vapour may have narcotic effect. Frostbite (cold burn). Product may release Hydrogen Sulphide: A specific assessment of inhalation risks from the presence of hydrogen sulphide in tank headspaces, confined spaces, product residue, tank waste and waste water, and unintentional releases should be made to help determine controls appropriate to local circumstances.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

SUBSTANCE	CAS No.	EC No.	%W/W
Gasoline	86290-81-5	289-220-8	100

SECTION 4: FIRST AID MEASURES



4.1 Description of first aid measures

Self-protection of the first aider

Inhalation

Skin contact

Eye contact

Avoid all contact. Do not breathe gas. Wear appropriate personal protective equipment, avoid direct contact. Eliminate sources of ignition. The vapour is heavier than air; beware of pits and confined spaces. If it is suspected that fumes are still present, the responder should wear an appropriate mask or self-contained breathing apparatus.

IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. If unconscious, place in recovery position and get medical attention immediately. IF exposed or concerned: Get medical advice/attention.

IF ON SKIN (or hair): Remove contaminated clothing immediately and drench affected skin with plenty of water, then wash with soap and water. If irritation (redness, rash, blistering) develops, get medical attention. Frostbite (cold burn): Do not attempt to remove clothing that adheres to the skin due to freezing. Thaw frosted parts with lukewarm water. Do no rub affected area.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

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Ingestion

4.2 Most important symptoms and effects, both acute and delayed

4.3 Indication of any immediate medical attention and special treatment needed IF SWALLOWED: Rinse mouth. Give 200-300mls (half pint) water to drink. Never give anything by mouth to an unconscious person. Do not induce vomiting. Get medical advice/attention if you feel unwell.

Harmful if inhaled. May cause genetic defects. May cause cancer. May damage the unborn child. May cause damage to organs through prolonged or repeated exposure.

Treat symptomatically. If breathing is laboured, oxygen should be administered by qualified personnel. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing media Unsuitable extinguishing media

5.2 Special hazards arising from the substance or mixture

Liquefied gas

5.3 Advice for fire-fighters

Foam, CO2 or dry powder.

Do not use water jet. Direct water jet may spread the fire.

Extremely flammable gas. Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Vapour may create explosive atmosphere. The vapour is heavier than air; beware of pits and confined spaces. Combustion or thermal decomposition will evolve very toxic, irritant and flammable vapours. Hazardous decomposition product(s): Carbon monoxide, Carbon dioxide, A mixture of solid and liquid particulates and gases including unidentified organic and inorganic compounds. Product may release Hydrogen Sulphide.

Contains gas under pressure; may explode if heated. Sealed containers may rupture explosively if hot. Do not pierce or burn, even after use.

Fight fire with normal precautions from a reasonable distance. Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Keep containers cool by spraying with water if exposed to fire. Avoid release to the environment.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

H2S Warning

6.2 Environmental precautions

6.3 Methods and material for containment and cleaning

Small scale:

Large scale:

6.4 Reference to other sections

Avoid all contact. Do not breathe gas. Shut off source of leak if safe to do so. Eliminate all ignition sources if safe to do so. Ensure adequate ventilation. Stay upwind/keep distance from source. In case of inadequate ventilation wear respiratory protection. Wear appropriate personal protective equipment, avoid direct contact. Contaminated clothing should be thoroughly cleaned. The vapour is heavier than air; beware of pits and confined spaces. Danger of flashback. Take precautionary measures against static discharge. Do not use sparking tools. Spillage can create tripping or slipping hazards for personnel, or skidding hazards for vehicles. Only trained and properly protected personnel must be involved in clean-up operations.

Product may release Hydrogen Sulphide: A specific assessment of inhalation risks from the presence of hydrogen sulphide in tank headspaces, confined spaces, product residue, tank waste and waste water, and unintentional releases should be made to help determine controls appropriate to local circumstances.

Avoid release to the environment. Contain the spillage. Any large spillage into watercourses must be alerted to the regulatory authority responsible for environmental protection or other regulatory body.

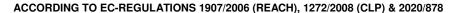
Only trained and properly protected personnel must be involved in clean-up operations. Ensure adequate ventilation. Isolate the area and allow vapours to disperse.

Contain spillages with sand, earth or any suitable adsorbent material. Allow small spillages to evaporate provided there is adequate ventilation. Transfer to a lidded container for disposal or recovery. Ventilate the area and wash spill site after material pick-up is complete.

In case of major fire and large quantities.: Evacuate area. Fight fire remotely due to the risk of explosion Notify police and fire brigade as soon as possible.

See Section: 8,13

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SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling Avoid all contact. Do not breathe gas. Eliminate sources of ignition. Keep away

from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. The vapour is heavier than air; beware of pits and confined spaces. Danger of flashback. Take precautionary measures against static discharge. Do not use sparking tools. Provide adequate ventilation, including appropriate local extraction if dusts, fumes or vapours are likely to be evolved. When using do not eat or drink. In case of inadequate ventilation wear respiratory protection. Wash hands and exposed skin thoroughly after handling. Wash contaminated clothing

before reuse.

H2S Warning: Product may release Hydrogen Sulphide: A specific assessment of inhalation

risks from the presence of hydrogen sulphide in tank headspaces, confined spaces, product residue, tank waste and waste water, and unintentional releases should be made to help determine controls appropriate to local circumstances.

7.2 Conditions for safe storage, including any Store in a cool/low-temperature, well-ventilated (dry) place away from heat and incompatibilities

ignition sources. Ensure adequate earthing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Keep cool.

Storage temperature

Incompatible materials Strong oxidising agents. Keep away from heat and sources of ignition.

7.3 Specific end use(s) See Section: 1.2

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

8.1.1 Occupational Exposure Limits

SUBSTANCE	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m³)	STEL (ppm)	STEL (mg/m³)	Note
Liquefied petroleum gas	68476-85-7	1000	1750	1250	2180	WEL

Source: WEL: Workplace Exposure Limit (UK HSE EH40)

8.1.2 Biological limit value Not established.

PNECs and DNELs 8.1.3 Not established.

8.2 **Exposure controls**

8.2.1 Appropriate engineering controls Provide adequate ventilation, including appropriate local extraction if dusts, fumes

or vapours are likely to be evolved. Store in a cool/low-temperature, wellventilated (dry) place away from heat and ignition sources. Guarantee that the eye flushing systems and safety showers are located close to the working place.

8.2.2 Individual protection measures, such as personal Fuels are typically used, transferred and transported in closed systems. Ensure protective equipment (PPE)

adequate ventilation. Do not eat, drink or smoke at the work place.

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Eye/ face protection

Wear eye protection with side protection (EN166). Have available eyewash bottle with clean water.

Skin protection Hand protection: Wear impervious gloves (EN374). Breakthrough time of the glove material: refer to the information provided by the gloves' producer.

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Body protection: Apron or other light protective clothing, boots and plastic or rubber gloves.

Respiratory protection



breathing apparatus and suitable protective clothing should be worn in fire conditions.

Recommended: BS EN 14387:2004+A1

Thermal hazards Not applicable.

8.2.3 **Environmental Exposure Controls** Avoid release to the environment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

> Colour Colourless Odour Sweet Melting point/freezing point -183°C - -20°C

Boiling point or initial boiling point and boiling range

Flammability

Lower and upper explosion limit

Flash point

Auto-ignition temperature Decomposition temperature

рΗ

Kinematic viscosity

Solubility

Partition coefficient: n-octanol/water (log value)

Vapour pressure

Density and/or relative density Relative vapour density

Particle characteristics

In case of inadequate ventilation wear respiratory protection. A self contained

Physical state Liquefied gas

-1°C

Extremely flammable gas.

Flammable Limits (Lower) (%v/v): 1.8 Flammable Limits (Upper) (%v/v): 15

-104°C - -60°C 410 - 540°C Not established. Not established. Not applicable.

Water: 0.024-0.061 g/l @ 20°C

Log Pow: <u><</u> 2.8

>60,000 - 9300,000 pascal @ 20°C

0.506-0.583 @ 15°C

> 1

Not established

9.2 Other information None known.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity Not determined. Stable under normal conditions. 10.2 Stable under normal conditions.

Chemical stability 10.3 Possibility of hazardous reactions Not determined. No information available.

10.4 Conditions to avoid Keep away from heat and sources of ignition. Incompatible materials Keep away from: Strong oxidising agents. 10.5

Hazardous decomposition products Combustion products: Carbon monoxide, Carbon dioxide, A mixture of solid and 10.6 liquid particulates and gases including unidentified organic and inorganic

compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

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

Acute toxicity - Ingestion

Acute toxicity - Inhalation

All test data taken from existing ECHA registrations for the substances

Based upon the available data, the classification criteria are not met. Calculated acute toxicity estimate (ATE) LD50: > 2,000 mg/kg.

Acute Tox. 4; H332: Harmful if inhaled. Estimated LC50 Gas > 2,500 ≤ 20,000 ppm

Hydrogen Sulphide: Acute Tox. 2; H330 - LC50 Gas (rat) 444 ppm (OECD 403)

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	Carbon Monoxide: Acute Tox. 3; H331 - LC50 Gas (rat) 1300 ppm (OECD 403)
Acute toxicity - Skin contact	Based upon the available data, the classification criteria are not met.

Calculated acute toxicity estimate (ATE) LD50: > 2,000 mg/kg.

Skin corrosion/irritation
Based upon the available data, the classification criteria are not met.

Based upon the available data, the classification criteria are not met.

Serious eye damage/irritation

Based upon the available data, the classification criteria are not met.

Based upon the available data, the classification criteria are not met.

Based upon the available data, the classification criteria are not met.

Germ cell mutagenicity Muta. 1B; H340: May cause genetic defects.

Benzene: In vitro - Positive (Hamster) study result 1985 Benzene: In vivo - Positive (mouse) study result 1996

Carcinogenicity Carc. 1A; H350: May cause cancer.

Benzene: Positive (rat) Test Result (EPA OPP 83-5)

Reproductive toxicity

Repr. 1A; H360D: May damage the unborn child.

Toxic for Reproduction - Negative (rat) study result (OECD 413)

Carbon Monoxide: Repr. 1A; H360D - LOAEC 65ppm

STOT - Single Exposure Based upon the available data, the classification criteria are not met.

STOT - Repeated Exposure STOT RE 2; H373: May cause damage to organs through prolonged or repeated

exposure.: Inhalation

Aspiration hazard Based upon the available data, the classification criteria are not met.

Not applicable - Liquefied gas

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties This substance does not have endocrine disrupting properties with respect to

humans.

11.2.2 Other information None known.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity Based upon the available data, the classification criteria are not met.

Estimated LC50 (Fish) 147.54 mg/L (96 hour) (Q)SAR

12.2 Persistence and degradability Readily biodegradable.

Degradation: 100% (Water) (Q)SAR (Unnamed publication, 1981)

12.3 Bioaccumulative potential No data

12.4 Mobility in soil The product is predicted to have moderate mobility in soil.

Slightly soluble in: Water (0.024-0.061 g/l @ 20°C)

12.5 Results of PBT and vPvB assessment Not classified as PBT or vPvB.

12.6 Endocrine disrupting properties This substance does not have endocrine disrupting properties with respect to

non-target organisms.

12.7 Other adverse effects None known.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods Disposal should be in accordance with local, state or national legislation. Do not

empty into drains, dispose of this material and its container at hazardous or

special waste collection point.

Waste classification according to Directive 2008/98/EC

(Waste Framework Directive)

Additional Information

13.2

EU Waste Codes: HP3, HP6, HP7, HP10, HP11

Containers of this material may be hazardous when empty since they retain

product residue. Do not pierce or burn, even after use.

SECTION 14: TRANSPORT INFORMATION

		ADR/RID	IMDG	IATA/ICAO
14.1	UN number or ID number	1075	1075	1075
14.2	UN proper shipping name	PETROLEUM GASES, LIQUEFIED	PETROLEUM GASES, LIQUEFIED	PETROLEUM GASES, LIQUEFIED
14.3	Transport hazard class(es)	2	2	2
14.4	Packing group	None assigned.	None assigned.	None assigned.
14.5	Environmental hazards	Not classified.	Not classified.	Not classified.

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14.6 Special precautions for user See Section: 2

14.7 Maritime transport in bulk according to IMO Not applicable Not applicable Not applicable

instruments

14.8 Additional information

Special Provisions 274, 392, 583, 639, 662, 674

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental

regulations/legislation specific for the substance or

mixture

15.1.1 EU regulations Authorisations and/or Restrictions On Use

Annex XVII (Restrictions) Petroleum gases, liquefied (Estimated Benzene content: ≥ 0.1%)

Entry 28: Restriction on supply of substances and mixtures to the general public,

if classified as Carc. 1A or 1B;

Entry 29: Restriction on supply of substances and mixtures to the general public,

if classified as Muta. 1A or 1B.

15.1.2 National regulations

Germany Water hazard class: 3 (Self classification)

15.2 Chemical Safety Assessment Not applicable.

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: New SDS Regulation 2020/878 format, all sections have been updated to include new information. Please review SDS with care.

References:

Existing ECHA registration(s) for Petroleum gases, liquified (CAS No. 68476-85-7), Carbon Monoxide (CAS No. 630-08-0), Hydrogen Sulphide (CAS No. 7783-06-4), Benzene (CAS No. 71-43-2).

EU Classification: This Safety Data Sheet was prepared in accordance with EC Regulation (EC) 1907/2006 (REACH), 1272/2008 (CLP) & 2020/878

Legend

ATE Acute Toxicity Estimate
BCF Bioconcentration factor
CAS Chemical Abstracts Service
DNEL Derived No Effect Level
EC European Community
EN European Standard
EU European Union

IATA International Air Transport Association

ICAO/IATA ICAO: International Civil Aviation Organization / IATA: International Air Transport Association

IMDG International Maritime Dangerous Goods

Kd Partition Coefficient
LC50 Lethal concentration 50
LD50 Lethal dose 50

LOAEC Lowest observed adverse effect concentration

LOAEL Lowest observed adverse effect level

LTEL Long Term Exposure Limit

NOAEL No Observed Adverse Effect Level

NOEC no observed effect concentration

OECD Organisation for Economic Cooperation and Development

PBT Persistent, Bioaccumulative and Toxic
PNEC Predicted No Effect Concentration
(Q)SAR Quantitative structure–activity relationship

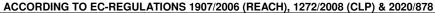
REACH Registration, Evaluation, Authorisation and Restriction of Chemicals

STEL Short Term Exposure Limit TWA Time Weighted Average

UN United Nations

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vPvB very Persistent and very Bioaccumulative

Hazard classification / Classification code:

Flam. Gas 1, Flammable gas, Category 1

Gases under pressure

Acute Tox. 4, Acute Toxicity, Category 4

Muta. 1B, Germ cell mutagen, Sub-category 1B

Carc. 1A, Carcinogen, Category 1A

Repr. 1A, Reproductive toxicant, Category 1A

STOT RE 2, Specific target organ toxicity - Repeated exposure,

Category 2

Hazard Statement(s)

H220: Extremely flammable gas.

H280: Contains gas under pressure; may explode if heated.

H332: Harmful if inhaled.

H340: May cause genetic defects.

H350: May cause cancer.

H360D: May damage the unborn child.

H373: May cause damage to organs through prolonged or repeated

exposure: inhalation.

Training advice: Consideration should be given to the work procedures involved and the potential extent of exposure as they may determine whether a higher level of protection is required.

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