

# SAFETY DATA SHEET



Revision: 16<sup>th</sup> February 2023 Version: 5.1


ACCORDING TO EC-REGULATIONS 1907/2006 (REACH), 1272/2008 (CLP) & 2020/878

LPG V8002a

## 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  
Telephone +31 10 498 7200  
Fax +31 10 452 9545  
E-Mail (competent person) [xrea.ch@vitol.com](mailto:xrea.ch@vitol.com)
- 1.4 Emergency telephone number**  
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

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.

Inhalation

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.

Skin contact

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 not rub affected area.

Eye contact

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	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.
<b>4.2 Most important symptoms and effects, both acute and delayed</b>	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.
<b>4.3 Indication of any immediate medical attention and special treatment needed</b>	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

<b>5.1 Extinguishing media</b> Suitable Extinguishing media Unsuitable extinguishing media	Foam, CO2 or dry powder. Do not use water jet. Direct water jet may spread the fire.
<b>5.2 Special hazards arising from the substance or mixture</b>  Liquefied gas	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.
<b>5.3 Advice for fire-fighters</b>	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

<b>6.1 Personal precautions, protective equipment and emergency procedures</b>  H2S Warning	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.
<b>6.2 Environmental precautions</b>	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.
<b>6.3 Methods and material for containment and cleaning up</b>  Small scale:  Large scale:	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.
<b>6.4 Reference to other sections</b>	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 incompatibilities

Store in a cool/low-temperature, well-ventilated (dry) place away from heat and ignition sources. Ensure adequate earthing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Storage temperature  
Incompatible materials

Keep cool.

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/m <sup>3</sup> )	STEL (ppm)	STEL (mg/m <sup>3</sup> )	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.

#### 8.1.3 PNECs and DNELs

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, well-ventilated (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 protective equipment (PPE)

Fuels are typically used, transferred and transported in closed systems. Ensure 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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Respiratory protection



Thermal hazards

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

In case of inadequate ventilation wear respiratory protection. A self contained breathing apparatus and suitable protective clothing should be worn in fire conditions.

Recommended: BS EN 14387:2004+A1

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

Physical state	Liquefied gas
Colour	Colourless
Odour	Sweet
Melting point/freezing point	-183°C – -20°C
Boiling point or initial boiling point and boiling range	-1°C
Flammability	Extremely flammable gas.
Lower and upper explosion limit	Flammable Limits (Lower) (%v/v): 1.8 Flammable Limits (Upper) (%v/v): 15
Flash point	-104°C – -60°C
Auto-ignition temperature	410 – 540°C
Decomposition temperature	Not established.
pH	Not established.
Kinematic viscosity	Not applicable.
Solubility	Water: 0.024-0.061 g/l @ 20°C
Partition coefficient: n-octanol/water (log value)	Log Pow: ≤ 2.8
Vapour pressure	>60,000 - 9300,000 pascal @ 20°C
Density and/or relative density	0.506-0.583 @ 15°C
Relative vapour density	> 1
Particle characteristics	Not established

### 9.2 Other information

None known.

## SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity	Not determined. Stable under normal conditions.
10.2 Chemical stability	Stable under normal conditions.
10.3 Possibility of hazardous reactions	Not determined. No information available.
10.4 Conditions to avoid	Keep away from heat and sources of ignition.
10.5 Incompatible materials	Keep away from: Strong oxidising agents.
10.6 Hazardous decomposition products	Combustion products: Carbon monoxide, Carbon dioxide, A mixture of solid and liquid particulates and gases including unidentified organic and inorganic compounds.

## SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008	All test data taken from existing ECHA registrations for the substances mentioned.
Acute toxicity - Ingestion	Based upon the available data, the classification criteria are not met. Calculated acute toxicity estimate (ATE) LD50: > 2,000 mg/kg.
Acute toxicity - Inhalation	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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<b>Acute toxicity - Skin contact</b>	Carbon Monoxide: Acute Tox. 3; H331 - LC50 Gas (rat) 1300 ppm (OECD 403) Based upon the available data, the classification criteria are not met. Calculated acute toxicity estimate (ATE) LD50: > 2,000 mg/kg.
<b>Skin corrosion/irritation</b>	Based upon the available data, the classification criteria are not met.
<b>Serious eye damage/irritation</b>	Based upon the available data, the classification criteria are not met.
<b>Respiratory or skin sensitisation</b>	Based upon the available data, the classification criteria are not met.
<b>Germ cell mutagenicity</b>	Muta. 1B; H340: May cause genetic defects. Benzene: In vitro - Positive (Hamster) study result 1985 Benzene: In vivo - Positive (mouse) study result 1996
<b>Carcinogenicity</b>	Carc. 1A; H350: May cause cancer.
<b>Reproductive toxicity</b>	Benzene: Positive (rat) Test Result (EPA OPP 83-5) Repr. 1A; H360D: May damage the unborn child. Toxic for Reproduction - Negative (rat) study result (OECD 413)
<b>STOT - Single Exposure</b>	Carbon Monoxide: Repr. 1A; H360D – LOAEC 65ppm
<b>STOT - Repeated Exposure</b>	Based upon the available data, the classification criteria are not met. STOT RE 2; H373: May cause damage to organs through prolonged or repeated exposure.: Inhalation
<b>Aspiration hazard</b>	Based upon the available data, the classification criteria are not met. Not applicable - Liquefied gas
<b>11.2 Information on other hazards</b>	
<b>11.2.1 Endocrine disrupting properties</b>	This substance does not have endocrine disrupting properties with respect to humans.
<b>11.2.2 Other information</b>	None known.

## SECTION 12: ECOLOGICAL INFORMATION

<b>12.1 Toxicity</b>	Based upon the available data, the classification criteria are not met. Estimated LC50 (Fish) 147.54 mg/L (96 hour) (Q)SAR
<b>12.2 Persistence and degradability</b>	Readily biodegradable. Degradation: 100% (Water) (Q)SAR (Unnamed publication ,1981)
<b>12.3 Bioaccumulative potential</b>	No data
<b>12.4 Mobility in soil</b>	The product is predicted to have moderate mobility in soil. Slightly soluble in: Water (0.024-0.061 g/l @ 20°C)
<b>12.5 Results of PBT and vPvB assessment</b>	Not classified as PBT or vPvB.
<b>12.6 Endocrine disrupting properties</b>	This substance does not have endocrine disrupting properties with respect to non-target organisms.
<b>12.7 Other adverse effects</b>	None known.

## SECTION 13: DISPOSAL CONSIDERATIONS

<b>13.1 Waste treatment methods</b>	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. EU Waste Codes: HP3, HP6, HP7, HP10, HP11
Waste classification according to Directive 2008/98/EC (Waste Framework Directive)	
<b>13.2 Additional Information</b>	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

	<b>ADR/RID</b>	<b>IMDG</b>	<b>IATA/ICAO</b>
<b>14.1 UN number or ID number</b>	1075	1075	1075
<b>14.2 UN proper shipping name</b>	PETROLEUM GASES, LIQUEFIED	PETROLEUM GASES, LIQUEFIED	PETROLEUM GASES, LIQUEFIED
<b>14.3 Transport hazard class(es)</b>	2	2	2
<b>14.4 Packing group</b>	None assigned.	None assigned.	None assigned.
<b>14.5 Environmental hazards</b>	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 instruments	Not applicable	Not applicable	Not applicable
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 Annex XVII (Restrictions)	Authorisations and/or Restrictions On Use Petroleum gases, liquefied (Estimated Benzene content: $\geq 0.1\%$ ) 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.

## Disclaimers

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