

SAFETY DATA SHEET



Revision: 16th February 2023 Version: 5.1


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

PROPANE V8003a

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

1.1 Product identifier	
Product name	Propane
Product description	V8003a-PROPANE-PROPANE
Trade Name	PROPANE
Product code	PROP
CAS No.	74-98-6
EC No.	200-827-9
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. Heating fuel.
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)	xreach@vitol.com
1.4 Emergency Telephone Number	
Emergency Phone No.	+44 (0) 1235 239 670, 24/7
Language(s) 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
2.2 Label elements	
Product description	According to Regulation (EC) No. 1272/2008 (CLP) V8003a-PROPANE-PROPANE
Hazard Pictogram(s)	
Signal Word(s)	DANGER
Hazard Statement(s)	H220: Extremely flammable gas. H280: Contains gas under pressure; may explode if heated.
Precautionary Statement(s)	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: Eliminate all ignition sources if safe to do so. P410+P403: Protect from sunlight. 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).

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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

SUBSTANCE	CAS No.	EC No.	REACH Registration No.	%W/W
Propane	74-98-6	200-827-9	Not yet assigned in the supply chain	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. Eliminate sources of ignition. Use personal protective equipment as required. The vapour is heavier than air; beware of pits and confined spaces. Drench contaminated clothing with water before removing to avoid risk of sparks from static electricity. 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. Get medical advice/attention if you feel unwell.

Skin contact

IF ON SKIN: Remove clothing and wash thoroughly before use. Wash affected skin with soap and water. If skin irritation or rash occurs: Get medical advice/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. Seek medical advice.

Eye contact

IF IN EYES: Flush eyes with water for at least 15 minutes while holding eyelids open. Get medical attention if eye irritation develops or persists. Frostbite (cold burn): Obtain immediate medical attention. Treatment by an ophthalmologist due to possible caustic burn of the eyes may be required.

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.

4.2 Most important symptoms and effects, both acute and delayed

The vapour may have narcotic effect.

4.3 Indication of any immediate medical attention and special treatment needed

Skin contact: Frostbite (cold burn)

Notes to a physician:

IF INHALED: Administer oxygen if available and artificial respiration if necessary.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

Foam, CO₂ or dry powder

Unsuitable extinguishing media

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

5.2 Special hazards arising from the substance or mixture

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 products: Carbon monoxide, Carbon dioxide, Aldehydes, Ketones, Hydrogen, Alkene, Methane, A mixture of solid and liquid particulates and gases including unidentified organic and inorganic compounds.

Compressed gas

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

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5.3 Advice for firefighters 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 environment.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures Shut off source of leak if safe to do so. Eliminate all ignition sources if safe to do so. Ensure adequate ventilation. Do not breathe gas. Stay upwind/keep distance from source. In case of inadequate ventilation wear respiratory protection. Avoid all contact. Wear suitable protective clothing. 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.

6.2 Environmental precautions 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.

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

Small scale 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.

Large scale 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.

6.4 Reference to other sections See sections 8 and 13

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling 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. In case of inadequate ventilation wear respiratory protection. Wear suitable protective clothing. Do not breathe gas. Avoid all contact. Wash hands and exposed skin thoroughly after handling. Do not eat, drink or smoke at the work place. Wash contaminated clothing before reuse.

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 Keep cool.

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 Not assigned.

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-




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	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	Avoid all contact. Do not breathe gas. Fuels are typically used, transferred and transported in closed systems. Keep good industrial hygiene. Do not eat, drink or smoke at the work place.
Eye/ face protection	Wear eye protection with side protection (EN166). Eyewash bottles should be available.
	
Skin protection	Hand protection: Wear impervious gloves (EN374). Gloves should be changed regularly to avoid permeation problems. Breakthrough time of the glove material: refer to the information provided by the gloves' producer. Suitable materials: Butyl rubber, Nitrile rubber.
	
Respiratory protection	Body protection: Apron or other light protective clothing, boots and plastic or rubber gloves.
	
Thermal hazards	In case of inadequate ventilation wear respiratory protection. Recommended: BS EN 14387:2004+A1
	Skin contact: Frostbite (cold burn).
8.2.3 Environmental exposure controls	Avoid release to environment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties	
Physical state	Liquefied gas
Colour	Colourless
Odour	Odourless
Melting point/freezing point	- 159°C
Boiling point or initial boiling point and boiling range	- 162 to - 0.5°C @ 1013 hPa
Flammability	Extremely flammable gas.
Lower and upper explosion limit	Flammable Limits (Lower) (%v/v): 2.1 Flammable Limits (Upper) (%v/v): 10.1
Flash point	- 104°C
Auto-ignition temperature	> 400°C
Decomposition temperature	Not established
pH	Not applicable
Kinematic viscosity	Not established
Solubility	Water: 0.024-0.061 g/l @ 20°C
Partition coefficient: n-octanol/water (log value)	Log Pow: 2.3
Vapour pressure	750,000 pascal @ 15°C
Density and/or relative density	Not established
Relative vapour density	Not established
Particle characteristics	Not established
9.2 Other information	No information available.

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.

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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, Aldehydes, Ketones, Hydrogen, Alkene, Methane, 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	
	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	Based upon the available data, the classification criteria are not met. LC50 Inhalation (rat): 570,000 ppm/ 15 minutes
	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.
	Serious eye damage/irritation	Based upon the available data, the classification criteria are not met.
	Respiratory or skin sensitisation	Based upon the available data, the classification criteria are not met.
	Germ cell mutagenicity	Based upon the available data, the classification criteria are not met. There is no evidence of mutagenic potential. Contains: < 0.1% butadiene
	Carcinogenicity	Based upon the available data, the classification criteria are not met. No evidence of carcinogenicity. Contains: < 0.1% butadiene
	Reproductive toxicity	Based upon the available data, the classification criteria are not met. No evidence of reproductive effects.
	STOT - Single Exposure	Based upon the available data, the classification criteria are not met.
	STOT - Repeated Exposure	Based upon the available data, the classification criteria are not met.
	Aspiration hazard	Based upon the available data, the classification criteria are not met.
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.

SECTION 12: ECOLOGICAL INFORMATION

12.1	Toxicity	Based upon the available data, the classification criteria are not met. LC50 (Fish): > 1000 mg/l/96h
12.2	Persistence and degradability	Bioconcentration factor (BCF): Estimated 1.56-1.78
12.3	Bioaccumulative potential	The product has low potential for bioaccumulation.
12.4	Mobility in soil	The product has low mobility in soil.
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)	EU Waste Codes: HP3
13.2	Additional information	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

14.1	UN number or ID number	ADR/RID 1978	IMDG 1978	IATA/ICAO 1978
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14.2	UN proper shipping name	PROPANE	PROPANE	PROPANE
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		
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	392, 652, 657, 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	None - Contains: <0.1% Butadiene
15.1.2	National regulations	
	Germany	Water hazard class: Not hazardous
15.2	Chemical Safety Assessment	None.

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 Safety Data Sheet (SDS)

EU Harmonised Classification and Existing ECHA registration for Propane (CAS No. 74-98-6).

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
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
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
STEL	Short term exposure limit
TWA	Time Weighted Average
UN	United Nations
vPvB	very Persistent and very Bioaccumulative

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Hazard classification / Classification code:

Flam. Gas 1, Flammable gas, Category 1
Gases under pressure

Hazard Statement(s)

H220: Extremely flammable gas.
H280: Contains gas under pressure; may explode if heated.

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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