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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 +31 10 498 7200

Fax +31 10 452 9545
E-mail (competent person) xreach@vitol.com

1.4 Emergency Telephone Number

Telephone

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

Product description 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

Inhalation

Skin contact

Eye contact

Ingestion

4.2 Most important symptoms and effects, both acute and delayed

4.3 Indication of any immediate medical attention and special treatment needed

Notes to a physician:

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.

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.

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.

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.

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.

The vapour may have narcotic effect. Skin contact: Frostbite (cold burn)

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

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media Unsuitable extinguishing media

5.2 Special hazards arising from the substance or mixture

Foam, CO2 or dry powder

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

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.

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

Compressed gas

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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 Incompatible materials

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

Specific end use(s) See Section: 1.2

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

7.3

8.1.1 Occupational exposure limits Not assigned.

8.1.2 Biological limit value Not established.

8.1.3 PNECs and DNELs Not established.

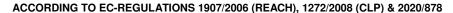
8.2 Exposure controls

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.

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

Respiratory protection



In case of inadequate ventilation wear respiratory protection.

Recommended: BS EN 14387:2004+A1

Thermal hazards 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 - 159°C Melting point/freezing point

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 > 400°C Auto-ignition temperature Decomposition temperature Not established Not applicable pН

Kinematic viscosity Not established

Water: 0.024-0.061 g/l @ 20°C Solubility Partition coefficient: n-octanol/water (log value) Log Pow: 2.3

750,000 pascal @ 15°C Vapour pressure

Not established Density and/or relative density Relative vapour density Not established Not established Particle characteristics

9.2 No information available. Other information

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

Acute toxicity - Inhalation

Acute toxicity - Skin contact

Skin corrosion/irritation Serious eye damage/irritation Respiratory or skin sensitisation

Germ cell mutagenicity

Carcinogenicity

Reproductive toxicity

STOT - Single Exposure STOT - Repeated Exposure

Aspiration hazard

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

11.2.2 Other information

12.7

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

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

LC50 Inhalation (rat): 570,000 ppm/ 15 minutes

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

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

Based upon the available data, the classification criteria are not met. There is no

evidence of mutagenic potential. Contains: < 0.1% butadiene

Based upon the available data, the classification criteria are not met. No

evidence of carcinogenicity. Contains: < 0.1% butadiene

Based upon the available data, the classification criteria are not met. No

evidence of reproductive effects.

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.

This substance does not have endocrine disrupting properties with respect to

humans. 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
 12.3 Bioaccumulative potential
 Bioconcentration factor (BCF): Estimated 1.56-1.78
 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.

None Known.

SECTION 13: DISPOSAL CONSIDERATIONS

Other adverse effects

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 Framework Directive)

13.2 Additional information

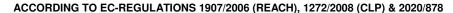
Containers of this material may be hazardous when empty since they retain product residue. Do not pierce or burn, even after use.

SECTION 14: TRANSPORT INFORMATION

 ADR/RID
 IMDG
 IATA/ICAO

 14.1
 UN number or ID number
 1978
 1978
 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

14.5Environmental hazardsNot classified14.6Special precautions for userSee Section: 2

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

instruments

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

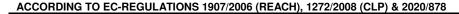
STEL Short term exposure limit
TWA Time Weighted Average

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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