SAFETY DATA SHEET

In accordance with 1907/2006 annex II and 1272/2008
(All references to EU regulations and directives are abbreviated into only the numeric term)
Revision date 2023-02-24
Replaces SDS issued 2021-01-22
Version number 5.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name	Refillable Propane Cylinder 0.34 kg Refillable Propane Cylinder 2 kg
Article number	200019, 201219

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

Identified uses	Propellants

1.3. Details of the supplier of the safety data sheet

Company	Sievert AB Box 1366 17126 SOLNA Sweden
Telephone	+46 (0)8-629 22 00
E-mail	info@sievert.se

1.4. Emergency telephone number

Phone number for emergencies: 999 or 112. The numbers are available 24/7.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Flam. Gas 1A, H220
Press. Gas (Comp.), H280
(See section 16)

2.2. Label elements

Hazard pictogram

Signal word	Danger
Hazard statements	
H220	Extremely flammable gas
H280	Contains gas under pressure; may explode if heated
Precautionary statements	
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

This product does not contain any substances that are assessed to be a PBT or a vPvB

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Note that the table shows known hazards of the ingredients in pure form. These hazards are reduced or eliminated when mixed or diluted, see Section 16d.

Constituent	Classification	Concentration
PROPANE		
CAS No: 74-98-6 EC No: 200-827-9 Index No: 601-003-00-5 REACH: 01-2119486944-21	Flam. Gas 1, Press. Gas (Comp.); H220, H280	>95 %
BUTANE		
CAS No: 106-97-8 EC No: 203-448-7 Index No: 601-004-00-0 REACH: 01-2119474691-32	Flam. Gas 1, Press. Gas (Comp.); H220, H280	<4 %
ISOBUTANE		
CAS No: 75-28-5 EC No: 200-857-2 Index No: 601-004-00-0 REACH: 01-2119485395-27	Flam. Gas 1, Press. Gas (Comp.); H220, H280	<4 %

Explanations to the classification and labelling of the ingredients are given in Section 16e. Official abbreviations are printed in normal font. Text in italics are specifications and/or complements used in the calculation of the classification of this mixture, see Section 16b.

SECTION 4: First aid measures

4.1. Description of first aid measures

Generally

Use breathing apparatus when rescuing exposed persons.

Transport the injured person to fresh air and administer oxygen immediately, and transport them to a hospital immediately.

Upon breathing in

Bring the injured person out into fresh air. Give artificial respiration if breathing has stopped. If breathing is difficult let trained personnel administer oxygen. Let the injured person rest in a warm place with fresh air and seek medical advice immediately.

Upon eye contact

Remove contact lenses immediately if possible.

Rinse the eye for several minutes with lukewarm water. If irritation persists call a doctor/ophthalmologist.

Upon skin contact

Remove contaminated clothes.

Heat the exposed body part in lukewarm water if cold injury occurs. Do NOT use warm water.

Frostbite should be treated by a doctor.

Upon ingestion

If symptoms persist contact a doctor.

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

Generally

Contact with rapidly expanding gas may cause frostbite.

Upon breathing in

High concentrations can displace the normal air and cause suffocation from lack of oxygen.

Upon eye contact

Frostbites.

Upon skin contact

Contact with rapidly expanding gas may cause frostbite.

Upon ingestion

Frostbites.

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

Symptomatic treatment.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Recommended extinguishing agents

Extinguish with powder, carbon dioxide or foam.

Unsuitable extinguishing agents

May not be extinguished with water dispersed under high pressure.

5.2. Special hazards arising from the substance or mixture

Gases detrimental to health (carbon monoxide and carbon dioxide) can be spread in case of fire.
In case of fire, high pressure may build up causing the packaging to explode.
The gas forms an explosive mixture with air.
Flammable gas.

5.3. Advice for firefighters

Protective measures should be taken regarding other material at the site of the fire.
Containers in the proximity of fire should be moved and cooled down with water.
If the gas cylinder cannot be removed, cool it with water as long as the fire persists and then at least 10 minutes.
Vapors are heavier than air and may spread along floors.
In case of fire use proper breathing apparatus.
Wear full protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use recommended safety equipment, see section 8.
Do not inhale the gas.
Area should be evacuated and gases removed with ventilation.
Note, risk of ignition and explosion.
Switch off equipment which has an exposed flame, glows, or has a heat source of some other kind.
Note, risk for formation of sparks due to static electricity. Do not remove clothing in a room where spillage has occurred.
Use breathing apparatus when oxygen levels are low or unknown.

6.2. Environmental precautions

Notify rescue services for larger spillage.
Prevent from entering sewers, basements and pits, or any place where gas accumulation could be dangerous.

6.3. Methods and material for containment and cleaning up

Let the gas from the leaking gas cylinders evaporate outdoors.
Evacuate and ventilate the premises.

6.4. Reference to other sections

See section 8 and 13 for personal protection equipment and disposal considerations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid spillage, inhalation and contact with eyes and skin.

Only experienced and properly instructed persons must handle compressed gas. Use only correctly specified equipment suitable for this substance, its pressure and temperature. Please contact your gas supplier in case of doubt.

Take precautionary measures against static discharge. Pressurized container: Do not pierce or burn, even after use. Protect from sunlight. Do no expose to temperatures exceeding 50 °C.

Handle in premises with good ventilation.

Check pipes and shut-off valves regularly for gas leakages.

Do not eat, drink or smoke in premises where this product is handled.

Open fires, hot objects, spark formation, or other sources of ignition, are not allowed in the premises where this product is handled. Prevent build up of static electricity by utilising a semi-conducting floor and shoe soles and keep humidity above 50%.

An evacuation plan should be available and evacuation routes must not be blocked.

7.2. Conditions for safe storage, including any incompatibilities

The product should be stored in a manner which prevents hazards to health and the environment. Avoid exposure to humans and animals and do not discharge the product in a sensitive environment.

Store at maximum 50 °C.

Contact with the liquid product can cause injuries from hypothermia.

Store in a dry place not above normal room temperature.

Store in a well-ventilated space.

Store tightly, in original packaging.

Do not store in direct sunlight.

7.3. Specific end use(s)

See identified uses in Section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. National limit values

BUTANE

United Kingdom (EH40/2005)

Time-weighted-average exposure limit (TWA) 600 ppm / 1450 mg/m^3

Short term exposure limit (STEL) 750 ppm / 1810 mg/m^3

Note Carc

Explanations of abbreviations are given in Section 16b

DNEL

No data available.

PNEC

No data available.

8.2. Exposure controls

The risks posed by the product or its constituents must be considered in the task specific risk assessment, in accordance with current working environment legislation. The risk assessment should be reviewed regularly and updated if necessary.

8.2.1. Appropriate engineering controls

The ventilation in the workplace must ensure an air quality that meets the requirements of the current working environment legislation. Local exhaust ventilation should be used to remove airborne contaminants at the source. Oxygen monitors should be used since suffocating gases may be released.

Eye/face protection

Eye protection should be worn if there is any danger of direct exposure or splashing.

Skin protection

Release of gas can cause strong cold. Gloves protecting against cold, labelled with the "cold hazard" pictogram, is recommended.

The most suitable protective glove should be chosen in consultation with the glove supplier, taking into account the risk assessment for the specific task and the properties of the chemicals involved. Note that the breakthrough time of the material is affected by the duration of the exposure, temperature conditions, abrasion, etcetera.

Respiratory protection

Use appropriate respiratory protective equipment in case of insufficient ventilation.
The most appropriate respiratory protective equipment should be decided in consultation with the appointed safety representative, taking into account the risk assessment for the specific task.
Breathing apparatus may be required.

8.2.3. Environmental exposure controls

Work with the product should take place in such a way that the product does not get into drains, waterways, soil and air.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

(a) Physical state	Gas Form: Liquefied gas
(b) Colour	colourless
(c) Odour	Distinctive and unpleasant if odorized, otherwise odorless
(d) Melting point/freezing point	Not indicated
(e) Boiling point or initial boiling point and boiling range	≈-45 °C
(f) Flammability	Not indicated
(g) Lower and upper explosion limit	2.2 - 10 %
(h) Flash point	-104 °C
(i) Auto-ignition temperature	450 °C
(j) Decomposition temperature	Not indicated
(k) pH	Not indicated
(l) Kinematic viscosity	Not indicated
(m) Solubility	Solubility in water: Very sparsely soluble(<0.1%)
(n) Partition coefficient n-octanol/water (log value)	Not indicated
(o) Vapour pressure	900 kPa (20 °C)
(p) Density and/or relative density	0.5 g/cm^3 (20°C)
(q) Relative vapour density	Not indicated
(r) Particle characteristics	Not indicated

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Not indicated

9.2.2. Other safety characteristics

Not indicated

SECTION 10: Stability and reactivity

10.1. Reactivity

The product contains no substances which can lead to hazardous reactions at normal use.

10.2. Chemical stability

The product is stable at normal storage and handling conditions.

10.3. Possibility of hazardous reactions

Reacts strongly or explosively with certain oxidising agents.

10.4. Conditions to avoid

Avoid heat, sparks and open flames.
Protect from direct sunlight.

10.5. Incompatible materials

Avoid contact with oxidizers.
Avoid contact with halogens.

10.6. Hazardous decomposition products

None under normal conditions.

SECTION 11: Toxicological information

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

Risk of frostbites.

Note that in case of inhalation of large quantities, there is risk of suffocation due to lack of oxygen.

Acute toxicity

The criteria for classification cannot be considered fulfilled based on available data.

PROPANE

LC50 rat 4h: 658 mg/L Inhalation

BUTANE

LC50 rat 4h: 658 mg/L Inhalation

ISOBUTANE

LC50 rat 4h: 658 mg/L Inhalation

Skin corrosion/irritation

Contact with compressed gas may cause frostbites.

Serious eye damage/irritation

Contact with compressed gas may cause frostbites.

Respiratory or skin sensitisation

The criteria for classification cannot be considered fulfilled based on available data.

Germ cell mutagenicity

The criteria for classification cannot be considered fulfilled based on available data.

Carcinogenicity

The criteria for classification cannot be considered fulfilled based on available data.

Reproductive toxicity

The criteria for classification cannot be considered fulfilled based on available data.

STOT-single exposure

High concentrations can displace the normal air and cause suffocation from lack of oxygen.

Prolonged inhalation can cause loss of consciousness and/or death.

STOT-repeated exposure

The criteria for classification cannot be considered fulfilled based on available data.

Aspiration hazard

The criteria for classification cannot be considered fulfilled based on available data.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

No information is available.

11.2.2. Other information

Not indicated.

SECTION 12: Ecological information

12.1. Toxicity

In the quantities with which this product is used, effects on the environment are negligible. Note however, that the local environment may be affected, and all discharge to the natural environment may impact ecosystems.

PROPANE

LC50 Freshwater water flea (Daphnia magna) 48h: 16.3 mg/L

LC50 Fish 96h: 16.1 mg/L

IC50 Algae 72h: 11.3 mg/L

12.2. Persistence and degradability

The product degrades easily in the natural environment.

12.3. Bioaccumulative potential

Neither this product, nor its contents, accumulates in nature.

12.4. Mobility in soil

No information about mobility in the nature exists but there is no reason to suppose the product to be ecologically harmful because of this.

Evaporates quickly in air.

12.5. Results of PBT and vPvB assessment

This product does not contain any substances that are assessed to be a PBT or a vPvB.

12.6. Endocrine disrupting properties

No information is available.

12.7. Other adverse effects

Large emissions into the air, in combination with sunlight, can create ground-level ozone and may result in damage to vegetation, as well as respiratory difficulties for humans and animals.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste handling of the product

This product is not usually recycled.

Product as well as packaging must be disposed of as hazardous waste.

Pressurized container: Do not pierce or burn, even after use.

See directive 2008/98/EC on waste. Observe national or regional provisions on waste management.

Classification according to 2008/98/EC

Recommended LoW-code: 16 05 05 Gases in pressure containers other than those mentioned in 16 05 04

SECTION 14: Transport information

Where not otherwise stated the information applies to all of the UN Model Regulations, i.e. ADR (road), RID (railway), ADN (inland waterways), IMDG (sea), and ICAO (IATA) (air).

14.1. UN number or ID number

1965

14.2. UN proper shipping name

HYDROCARBON GAS MIXTURE, LIQUEFIED, N.O.S. (PROPANE)

14.3. Transport hazard class(es)

Class

2: Gases

Classification code (ADR/RID)

2F: Liquefied gas: flammable

Subsidiary risk (IMDG)

No subsidary risk according to IMDG

Labels

14.4. Packing group

Not applicable

14.5. Environmental hazards

Not applicable

14.6. Special precautions for user

Tunnel restrictions

Tunnel category: B/D

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

14.8 Other transport information

Transport category: 2; Highest total quantity per transported unit 333 kg or liters

Stowage category E (IMDG)

Emergency Schedule (EmS) for FIRE (IMDG) F-D

Emergency Schedule (EmS) for SPILLAGE (IMDG) S-U

SECTION 15: Regulatory information

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

Not indicated.

15.2. Chemical safety assessment

Assessment and chemical safety report in accordance with 1907/2006 Annex I has not yet been performed.
Chemical safety report according to 1907/2006 Annex I is not required for this product.

SECTION 16: Other information

16a. Indication of where changes have been made to the previous version of the safety data sheet
Revisions of this document

Earlier versions
2021-01-22 Revisions of this document has, where not otherwise stated, been caused by changes in the regulations

16b. Legend to abbreviations and acronyms used in the safety data sheet
Full texts for Hazard Class and Category Code mentioned in section 3

Flam. Gas 1	Extremely flammable gas (Category 1) - Flam. Gas 1, H220 - Extremely flammable gas
Press. Gas (Comp.)	Gases under pressure: Compressed gas - Press. Gas (Comp.), H280 - Contains gas under pressure; may explode if heated
Flam. Gas 1A	Flammable gases, Hazard Category 1A - Flam. Gas 1A, H220 - Extremely flammable gas

Explanations of the abbreviations in Section 8
United Kingdom

Carc Capable of causing cancer and/or heritable genetic damage

Explanations of the abbreviations in Section 14

ADR European Agreement concerning the International Transport of Dangerous Goods by Road
RID Regulations concerning the International Transport of Dangerous Goods by Rail
IMDG International Maritime Dangerous Goods Code
ICAO International Civil Aviation Organization (ICAO, 999 University Street, Montreal, Quebec H3C 5H7, Canada)
IATA The International Air Transport Association
Tunnel restriction code: B/D; Transport in tanks: Passage not permitted through tunnels of category B, C, D and E. Other transport: Passage not permitted through tunnels of category D and E
Transport category: 2; Highest total quantity per transported unit 333 kg or liters

16c. Key literature references and sources for data
Sources for data

Primary data for the calculation of the hazards has preferentially been taken from the official European classification list, 1272/2008 Annex I , as updated to 2023-02-24.
Where such data was not available, alternative documentation used to establish the official classification was used, e.g. IUCLID (International Uniform Chemical Information Database). As a second alternative, information was used from reputable international chemical industries, and as a third alternative other available information was used, e.g. material safety data sheets from other suppliers or information from non-profit associations, where reliability of the source was assessed by expert opinion. If, in spite of this, reliable information could not be sourced, the hazards were assessed by expert opinions based on the known hazards of similar substances, and according to the principles in 1907/2006 and 1272/2008.

Full texts for Regulations mentioned in this Safety Data Sheet

1907/2006	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), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC
1272/2008	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, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006
2008/98/EC	DIRECTIVE 2008/98/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 19 November 2008 on waste and repealing certain Directives

16d. Methods of evaluating information referred to in 1272/2008 Article 9 which was used for the purpose of classification

Hazard calculation for this mixture has been performed as a cumulative assessment with the aid of expert assessments in accordance with 1272/2008 Annex I , where all available information which may be significant to establishing the hazards of the mixture was assessed together, and in accordance with 1907/2006 Annex XI .

16e. List of relevant hazard statements and/or precautionary statements
Full texts for hazard statements mentioned in section 3

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

16f. Advice on any training appropriate for workers to ensure protection of human health and the environment
Warning for misuse

Not indicated.

Other relevant information

Not indicated

Editorial information

This material safety data sheet has been prepared and checked by KemRisk®, KemRisk Sweden AB, Platensgatan 8, SE-582 20 Linköping, Sweden, www.kemrisk.se