

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)

Amendment date 2023-04-05

Replaces SDS issued 2021-12-28

Revision date 2021-12-28

Version number 6.1

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

1.1. Product identifier

Trade name	Propane US 2209
Article number	220983, 220984
UFI:	MC0R-UMPN-Y00M-QJC9

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

The product does not contain any substances identified as having endocrine disruptive properties in accordance with the criteria set out in (EU) 2017/2100 or (EU) 2018/605.

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	87.5 - 100 %
ETHANE		
CAS No: 74-84-0 EC No: 200-814-8 Index No: 601-002-00-X	Flam. Gas 1A, Press. Gas (Comp.); H220, H280	≤7 %
PROPENE		
CAS No: 115-07-1 EC No: 204-062-1 Index No: 601-011-00-9	Flam. Gas 1, Press. Gas (Comp.); H220, H280	≤5 %
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	≤2.5 %

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

Upon breathing in

Allow the injured person to rest in a warm place with fresh air, if symptoms persist seek medical attention.

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.

Warm up affected parts of the body if frostbite is apparent.

In case of major frost injuries, please contact your doctor.

Upon ingestion

If symptoms persist contact a doctor.

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

No further relevant information available.

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

Should not be extinguished with water.

5.2. Special hazards arising from the substance or mixture

Flammable gas.

In case of fire, high pressure may build up causing the packaging to explode.

Gases detrimental to health (carbon monoxide and carbon dioxide) can be spread in case of fire.

The gas forms an explosive mixture with air.

5.3. Advice for firefighters

In case of fire use proper breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Do not inhale the gas.

Note, risk of ignition and explosion.

Use recommended safety equipment, see section 8.

Upon small spillage < 5 kg. Evacuate the area and ventilate fumes.

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.

Chemical protection suits should be worn for all salvage and decontamination work.

6.2. Environmental precautions

Avoid emissions into soil, water or air.

Avoid discharge into sewers.

6.3. Methods and material for containment and cleaning up

Evacuate the area and ventilate fumes. Note, risk for explosion.

Residues left behind after cleaning shall be treated as hazardous waste. For further information, contact the local authority sanitisation works. Present this safety data sheet.

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

Do not inhale fumes and avoid contact with skin and eyes.

Store this product separately from food items and keep it out of the reach of children and pets.

Handle in premises with good ventilation.

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%.

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 in a well-ventilated space.

Store in a dry place not above normal room temperature.

Contact with the liquid product can cause injuries from hypothermia.

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/m³

Short term exposure limit (STEL) 750 ppm / 1810 mg/m³

Note Carc

ETHANETHIOL

United Kingdom (EH40/2005)

Time-weighted-average exposure limit (TWA) 0.5 ppm / 1.3 mg/m³

Short term exposure limit (STEL) 2 ppm / 5.2 mg/m³

Note

Explanations of abbreviations are given in Section 16b

DNEL

No data available.

PNEC

No data available.

8.2. Exposure controls

In terms of minimizing risks, attention must be paid to the physical hazards (see Sections 2 and 10) of this product according to EU directives 89/391 and 98/24 and national occupational legislation.

8.2.1. Appropriate engineering controls

Handle in premises which have modern ventilation standards.

Eye/face protection

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

Skin protection

Protective gloves are normally not needed due to the properties of this product, but may be necessary for other reasons, e.g. mechanical risks, temperature conditions or microbiological risks. Very sensitive persons can use gloves labelled "Low Chemical resistant" or "Waterproof" or with the pictogram indicated here.

Respiratory protection

Breathing apparatus may be required.

8.2.3. Environmental exposure controls

For limitation of environmental exposure, see Section 12.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

(a) Physical state	Gas Form: Compressed gas
(b) Colour	colourless
(c) Odour	unpleasantly
(d) Melting point/freezing point	-188 °C
(e) Boiling point or initial boiling point and boiling range	≈-42 °C
(f) Flammability	Not indicated
(g) Lower and upper explosion limit	2.2 - 9.6 %
(h) Flash point	-104 °C
(i) Auto-ignition temperature	Not indicated
(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	740 kPa (15°C)
(p) Density and/or relative density	0.5 kg/L
(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

No hazardous reactions known.

10.4. Conditions to avoid

Avoid heat, sparks and open flames.

10.5. Incompatible materials

Avoid contact with oxidizers.

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

This product's main risk is its flammability.

Acute toxicity

The product is not classified as harmful to health.

PROPANE

LC50 rat 4h: 658 mg/L Inhalation

BUTANE

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

Not sensitising.

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

At high concentrations there is an anaesthetic or narcotic effect.

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 product is not classified as being toxic for aspiration.

11.2. Information on other hazards**11.2.1. Endocrine disrupting properties**

The product does not contain any substances identified as having endocrine disruptive properties in accordance with the criteria set out in (EU) 2017/2100 or (EU) 2018/605.

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 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.

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

The product does not contain any substances identified as having endocrine disruptive properties in accordance with the criteria set out in (EU) 2017/2100 or (EU) 2018/605.

12.7. Other adverse effects

No known effects or hazards.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste handling of the product

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

This product is not usually recycled.

Also take local regulations for dealing with waste into account.

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 04 Gases in pressure containers (including halons) containing dangerous substances

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

1978

14.2. UN proper shipping name

PROPANE

14.3. Transport hazard class(es)

Class

2: Gases

Classification code (ADR/RID)

2F: Liquefied gas: flammable

Subsidiary risk (IMDG)

No subsidiary 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

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

2021-12-28 Changes in section(s) 2, 11, 12.

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 2023-04-05.

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

89/391 COUNCIL DIRECTIVE (89/391/EEC of 12 June 1989 on the introduction of measures to encourage improvements in the safety and health of workers at work

98/24 COUNCIL DIRECTIVE 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work (fourteenth individual Directive within the meaning of Article 16(1) of Directive 89/391/EEC)

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**

This product can cause injuries if not used properly. The manufacturer, the distributor or the supplier are not responsible for adverse effects if the product is not handled in accordance with its intended use.

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