

# SAFETY DATA SHEET

In accordance with 453/2010 and 1272/2008

(All references to EU regulations and directives are abbreviated into only the numeric term)

Issued 2014-12-17

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

### 1.1. Product identifier

**Trade name** Sievert Propan 2209

**Supplier's product number** 220983, 220984, 400g, 788ml

### 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  
SE-17126 SOLNA  
Sweden  
+46 8-629 22 00  
info@sievert.se

**Telephone**

**E-Mail**

### 1.4. Emergency telephone number

In case of emergency contact toxicological information, emergency tel 112 (within Europe) or 1-800-222-1222 (for USA). For other countries, use the built-in emergency number in your cell phone

For non-emergency poison information, see [http://www.who.int/gho/phe/chemical\\_safety/poisons\\_centres/en/](http://www.who.int/gho/phe/chemical_safety/poisons_centres/en/)

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

#### Classification in accordance with 1272/2008

Extremely flammable gas (Category 1)

Compressed gas

#### Classification in accordance with 1999/45/EG

Extremely flammable; F+; R12.

### 2.2. Label elements

#### Label information in accordance with 1272/2008

Hazard pictograms



Signal words

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

Eliminate all ignition sources if safe to do so

P410+P403

Protect from sunlight. Store in a well-ventilated place

#### Label information in accordance with 1999/45/EG

See section 16.

### 2.3. Other hazards

Not relevant.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

This product is composed of a gas mixture.

### 3.2. Mixtures

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

Constituent	Classification	Concentration
<b>PROPANE</b>		
CAS No 74-98-6 EC No 200-827-9 Index No 601-003-00-5	Flam Gas 1, Press Gas <i>P</i> ; H220, H280 F+; R12	87,5 - 100%
<b>ETHANE COMPRESSED</b>		
CAS No 74-84-0 EC No 200-814-8 Index No 601-002-00-X	Flam Gas 1A; H220 F+; R12	0 - 7%
<b>PROPENE</b>		
CAS No 115-07-1 EC No 204-062-1 Index No 601-011-00-9	Flam Gas 1, Press Gas <i>P</i> ; H220, H280 F+; R12	0 - 5%
<b>BUTANE &lt; 0.1% BUTADIENE</b>		
CAS No 106-97-8 EC No 203-448-7 Index No 601-004-00-0	Flam Gas 1, Press Gas <i>P</i> ; H220, H280 F+; R12	0 - 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 complement used in the calculation of the hazards of this mixture, see Section 16b  
Also contains component(s) not necessary to label.

## 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 advice.

#### Upon contact with the eyes

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: FIRE-FIGHTING 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

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

The gas forms an explosive mixture with air.

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

Flammable gas.

### 5.3. Advice for fire-fighters

In case of fire use a respirator mask.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1. Personal precautions, protective equipment and emergency procedures

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

Use recommended safety equipment, see section 8.

Do not inhale the gas.

Note, risk of ignition and explosion.

Upon small spillage < 5 kg Vacate the area and ventilate the 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.

### 6.2. Environmental precautions

Avoid discharge 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

Not applicable

## SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for safe handling

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

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 tightly, in original packaging.

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

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

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

Store in a dry place not above normal room temperature.

Handle in a premises which is well ventilated.

Store in a well-ventilated space.

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

Do not store in direct sunlight.

Contact with the liquid product can cause injuries from hypothermia.

### 7.3. Specific end uses

Not relevant.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

#### 8.1.1. National limit values, United Kingdom

**BUTANE < 0.1% BUTADIENE**

**Time-weighted-average exposure limit (TWA) 600 ppm / 1450 mg/m<sup>3</sup> Short term exposure limit (STEL)  
750 ppm / 1810 mg/m<sup>3</sup>**

Other ingredients (cf. Section 3) have no occupational exposure limit values.

### 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.



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.

A respiratory mask may be required.

For limitation of environmental exposure, see Section 12.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

a) Appearance	Form: Compressed gas Colour: colourless
b) Odour	Unpleasantly
c) Odour threshold	Not applicable
d) pH	Not applicable
e) Melting point/freezing point	-188 °C
f) Initial boiling point and boiling range	Ca -42 °C at atmospheric pressure (101325 Pa)
g) Flash point	-104 °C
h) Evaporation rate	Not applicable
i) Flammability (solid, gas)	Extremely flammable gas
j) Upper/lower flammability or explosive limits	Lower explosion limit 2.2% Upper explosion limit 9.6%
k) Vapour pressure	740 kPa (15 °C)
l) Vapour density	Not applicable
m) Relative density	0,5 kg/L
n) Solubility	Solubility in water Very sparsely soluble(<0.1%)
o) Partition coefficient: n-octanol/water	Not applicable
p) Auto-ignition temperature	Not applicable
q) Decomposition temperature	Not applicable
r) Viscosity	Not applicable
s) Explosive properties	Not applicable
t) Oxidising properties	Not applicable

### 9.2. Other information

No data available

## 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 toxicological effects

#### General or unspecific toxicity

This product's main risk is its flammability.

**Acute effects**

Not classified as an acutely toxic substance.

**Harmfulness**

The product is not classified as harmful to health.

**Corrosive and irritating effects**

Contact with liquefied gas may cause frostbite on skin and eyes.

**Effect on judgement and other psychological effects**

At high concentrations there is an anaesthetic or narcotic effect.

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

**Relevant toxicological properties****PROPANE**

LC50 rat (Inhalation) 4h = 658 mg/L inhalation

**BUTANE < 0.1% BUTADIENE**

LC50 rat (Inhalation) 4h = 658 mg/L inhalation

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

**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

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.

### 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. Other adverse effects

None known effects or hazards.

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

**Waste handling for the product**

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

Also take local regulations for dealing with waste into account.

Cf. also national waste regulations.

**Special advises for waste handling**

16 05 04.

**Recycling of the product**

This product is not usually recycled.

**Transportation of waste**

Not indicated

## SECTION 14: TRANSPORT INFORMATION

This product is only supposed to be transported by road or railway and just the transport regulations ADR/RID thus apply.

### 14.1. UN number

1978

### 14.2. UN proper shipping name

PROPANE

### 14.3. Transport hazard class(es)

#### Class

2: Gases

#### Classification code (ADR/RID)

2F:

#### Subsidiary risk (IMDG)

#### Labels



### 14.4. Packing group

Packing group: Not applicable

### 14.5. Environmental hazards

Not applicable

### 14.6. Special precautions for user

#### Tunnel restrictions

Tunnel category: B/D.

### 14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable

### 14.8 Other transport information

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

## SECTION 15: REGULATORY INFORMATION

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

Not applicable.

### 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

This is the first version.

### 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)
Press Gas <i>P</i>	Compressed gas
Flam Gas 1A	Extremely flammable gas, ignitable < 13 % (Category 1A)
<i>No tox haz</i>	Not classified as toxic

#### Comprehensive definition of the hazards mentioned in Section 2

##### Flam Gas 1

Gases, which at 20 °C and a standard pressure of 101,3 kPa:

- (a) are ignitable when in a mixture of 13 % or less by volume in air; or
- (b) have a flammable range with air of at least 12 percentage points regardless of the lower flammable limit.

##### Press Gas *P*

A gas which when packaged under pressure is entirely gaseous at -50 C including all gases with a critical temperature  $\leq$  -50 C

#### 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

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 2014-12-17.

Where such data was lacking, on the second hand the documentation on which this official classification is based was used, e.g. IUCLID (International Uniform Chemical Information Database). On the third hand, information was used from reputable international chemical suppliers, and on the fourth hand from other available information, e.g. safety data sheets from other suppliers or information from non-profit associations, whereby the reliability of the source was judged by an expert. If, in spite of this, reliable information was not found, the hazards were judged by expert opinions based on the known properties of similar substances, and according to the principles in 1907/2006 and 1272/2008.

### Full texts for Regulations mentioned in this Safety Data Sheet

- 453/2010 COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
- 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
- 1999/45/EG DIRECTIVE 1999/45/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 31 May 1999 concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations
- 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)
- 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 Annex I

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

The calculation of the hazards of this mixture has been performed as an evaluation by applying a weight of evidence determination using expert judgement in accordance with 1272/2008 Annex I, weighing all available information having a bearing on the determination of the hazards of the mixture, and in accordance with 1907/2006 Annex XI.

## 16e. List of relevant R phrases, hazard statements, safety phrases and/or precautionary statements

### Full text for risk phrases mentioned in section 3

R12 Extremely flammable

### 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

### Label information in accordance with 1999/45/EG

Hazard symbol   
Extremely flammable

### R-phrases

R12 Extremely flammable

### S-phrases

S9 Keep container in a well-ventilated place

S16 Keep away from sources of ignition - No smoking

## Editorial information

This safety data sheet has been generated by the program KemRisk®, KemRisk Sweden AB, Teknikringen 10, SE-583 30 Linköping, Sweden.