

SAFETY DATA SHEET

In accordance with 1907/2006 Annex II (2015/830) and 1272/2008
(All references to EU regulations and directives are abbreviated into only the numeric term)
Issued 2017-05-31
Replaces issued SDS 2015-05-27
Version number 2.0

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

1.1. Product identifier

Trade name Butangas
Article number 2201, 168g, 300ml - 2210, 190g, 300ml

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

Acute cases: Call 112, request poison information.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Extremely flammable gas (Category 1), H220

Liquefied pressurized gas, H280

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

Not indicated.

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
BUTANE		
CAS No: 106-97-8 EC No: 203-448-7	Flam Gas 1, Press Gas P; H220, H280	95 - 100 %

Index No: 601-004-00-0 REACH: 01-2119474691-32		
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 <i>P</i> ; H220, H280	≤5 %
BUTADIENE		
CAS No: 106-99-0 EC No: 203-450-8 Index No: 601-013-00-X	Flam Gas 1 <i>B</i> , Muta 1 <i>B</i> , Carc 1 <i>A</i> ; H220, H340, H350	<0.1 %
ETANETHIOL		
CAS No: 75-08-1 EC No: 200-837-3 Index No: 016-022-00-9	Flam Liq 2, Acute Tox 4 <i>vapour</i> , Aquatic Acute 1, Aquatic Chronic 1; <i>M = 1</i> ; H225, H332, H400, H410	<0.01 %

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

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

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 or carbon dioxide.

Unsuitable extinguishing agents

May 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.

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

Use recommended safety equipment, see section 8.

Keep unauthorized and unprotected people at a safe distance.

Switch off equipment which has an exposed flame, glows, or has a heat source of some other kind.

Ensure good ventilation.

6.2. Environmental precautions

Not indicated.

6.3. Methods and material for containment and cleaning up

Do not use water or cleaning agents containing water.

6.4. Reference to other sections

Not indicated.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

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 fire, hot items, sparks or other ignition sources must not be present in the environment used for handling this product.

Take precautionary measures against static discharge. Pressurized container: Do not pierce or burn, even after use. Protect from sunlight. Do not expose to temperatures exceeding 50 °C.

7.2. Conditions for safe storage, including any incompatibilities

Store in a well-ventilated space.

Store in dry and cool area.

7.3. Specific end uses

Not relevant.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. National limit values

BUTANE

United Kingdoms (EH40/2005)

Time-weighted-average exposure limit (TWA) 600 ppm / 1450 mg/m³

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

BUTADIENE

United Kingdoms (EH40/2005)

Time-weighted-average exposure limit (TWA) 10 ppm / 22 mg/m³

ETANETHIOL

United Kingdoms (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

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.

Eye/face protection

Not relevant.

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.

Respiratory protection

A respiratory mask 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) Appearance	Form: Liquefied gas. Colour: colourless.
b) Odour	Distinctive and unpleasant if odorized, otherwise odorless
c) Odour threshold	Not indicated
d) pH	Not indicated
e) Melting point/freezing point	Not indicated
f) Initial boiling point and boiling range	-5 °C
g) Flash point	Not indicated
h) Evaporation rate	Not indicated
i) Flammability (solid, gas)	Not applicable
j) Upper/lower flammability or explosive limits	Lower explosion limit 1.8% Upper explosion limit 9%
k) Vapour pressure	180 kPa (15°C)
l) Vapour density	1.5 (15 °C, air = 1)
m) Relative density	0.575 kg/L
n) Solubility	Not indicated
o) Partition coefficient: n-octanol/water	Not applicable
p) Auto-ignition temperature	410 °C
q) Decomposition temperature	Not indicated
r) Viscosity	Not indicated
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

May emit volatile, flammable vapours. Avoid handling close to heat or ignition sources.

10.4. Conditions to avoid

Avoid heat, sparks and open flames.

10.5. Incompatible materials

Not indicated.

10.6. Hazardous decomposition products

Not indicated.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Not indicated.

Acute toxicity

Not classified as an acutely toxic substance.

BUTANE

LC50 rat 4h: 658 mg/L Inhalation

LD50 rat 24h: 658000 mg/kg Orally

PROPANE

LC50 rat 4h: 658 mg/L Inhalation

Skin corrosion/irritation

The product is not corrosive. Minor irritation may arise.

Serious eye damage/irritation

Eye contact may cause burning pain or irritation.

Respiratory or skin sensitisation

No hypersensitive reactions have been reported for the substances in this mixture.

Germ cell mutagenicity

No mutagenic effects have been reported for the substance in this mixture.

Carcinogenicity

No carcinogenic effects have been reported for this product.

Reproductive toxicity

To the best of our knowledge, no mutagenic or otherwise genetic or reproductive toxic effects have been reported for this

product.

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

Not indicated.

SECTION 12: Ecological information

12.1. Toxicity

No ecological damage is known or expected in the event of normal use.

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

There is no information regarding persistence or degradability.

12.3. Bioaccumulative potential

There is no information regarding bioaccumulation.

12.4. Mobility in soil

Information about mobility in nature is not available.

12.5. Results of PBT and vPvB assessment

No chemical safety report has been executed.

12.6. Other adverse effects

Not indicated.

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.

Also take local regulations for dealing with waste into account.

See also national waste regulations.

This product is not usually recycled.

Classification according to 2006/12

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

2037

14.2. UN proper shipping name

RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES)

14.3. Transport hazard class(es)

Class

2: Gases

Classification code (ADR/RID)

5F: Aerosols, flammable

Labels



14.4. Packing group

Not applicable

14.5. Environmental hazards

Not applicable

14.6. Special precautions for user

Tunnel restrictions

Tunnel category: 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

Stowage category not indicated (IMDG)

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

2015-05-27 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)
Press Gas P	Compressed gas
Flam Gas 1B	Extremely flammable gas, flammable range > 12 percentage points (Category 1B)
Muta 1B	May cause genetic defects (Category 1B)
Carc 1A	May cause cancer (Category 1A)
Flam Liq 2	Flammable liquids (Category 2)
Acute Tox 4vapour	Acute toxicity (Category 4 vapours)
Aquatic Acute 1	Very toxic to aquatic life (Category Acute 1)
Aquatic Chronic 1; M = 1	Very toxic to aquatic life with long lasting effects to aquatic environments (Category Chronic 1)

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: D; Passage forbidden through tunnels of category D and E type

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 2017-05-31.

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 Annex II (2015/830)	COMMISSION REGULATION (EU) 2015/830 of 28 May 2015 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
EH40/2005	EH40/2005 Workplace exposure limits
89/391	COUNCIL DIRECTIVE (89/391/EEC of 12 June 1989 on the introduction of

98/24	measures to encourage improvements in the safety and health of workers at work 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)
2006/12	DIRECTIVE 2006/12/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 5 April 2006 on waste
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

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

H340 May cause genetic defects <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>

H350 May cause cancer <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>

H225 Highly flammable liquid and vapour

H332 Harmful if inhaled

H400 Very toxic to aquatic life

H410 Very toxic to aquatic life with long lasting effects

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

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