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 2015-05-27

Replaces issued SDS 2015-02-26

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

1.1. Product identifier

Trade name	**Butangas**
Supplier's product 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 SE-17126 SOLNA Sweden
Telephone	+46 8-629 22 00
E-Mail	info@sievert.se

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/

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification in accordance with 1272/2008

Extremely flammable gas (Category 1)

Liquefied pressurized gas

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

2.3. Other hazards

Not relevant.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

This product is composed of a liquefied 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
BUTANE < 0.1% BUTADIENE			
CAS No	106-97-8	Flam Gas 1, Press Gas *P*; H220, H280	95 - 100%
EC No	203-448-7		
Index No	601-004-00-0		
PROPANE			
CAS No	74-98-6	Flam Gas 1, Press Gas *P*; H220, H280	0 - 5%
EC No	200-827-9		
Index No	601-003-00-5		
BUTADIENE			
CAS No	106-99-0	Flam Gas 1*B*, Muta 1B, Carc 1A; H220, H340, H350	< 0,1%
EC No	203-450-8		
Index No	601-013-00-X		
ETANTHIOL			
CAS No	75-08-1	Flam Liq 2, Acute Tox 4*vapour*, Aquatic Acute 1, Aquatic Chronic 1*; M = 1*; H225, H332, H400, H410	< 0,01%
EC No	200-837-3		
Index No	016-022-00-9		

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

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

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

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.

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

Use recommended safety equipment, see section 8.

Ensure good ventilation.

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.

6.2. Environmental precautions

Not applicable

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 applicable

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.

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

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 no expose to temperatures exceeding 50 °C.

7.2. Conditions for safe storage, including any incompatibilities

Store in dry and cool area.

Handle in a premises which is well ventilated.

Store in a well-ventilated space.

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

BUTADIENE

Time-weighted-average exposure limit (TWA) 10 ppm / 22 mg/m^3

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.

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: Liquefied gas Colour: colourless
b)	Odour	Distinctive and unpleasant if odorized, otherwise odorless
c)	Odour threshold	Not applicable
d)	pH	Not applicable
e)	Melting point/freezing point	Not applicable

f)	Initial boiling point and boiling range	-5 °C at atmospheric pressure (101325 Pa)
g)	Flash point	Not applicable
h)	Evaporation rate	Not applicable
i)	Flammability (solid, gas)	Extremely flammable gas
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	1.50 (15 °C, air = 1.0)
m)	Relative density	0,575 kg/L
n)	Solubility	Not applicable
o)	Partition coefficient: n-octanol/water	Not applicable
p)	Auto-ignition temperature	410 °C
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

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

Acute effects

Not classified as an acutely toxic substance.

Harmfulness

The product is not classified as harmful to health.

Repeated dose toxicity

No chronic effects have been reported for this product.

Carcinogenicity

No carcinogenic effects have been reported for this product.

CMR effects

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

Sensibilisation

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

Corrosive and irritating effects

This product may irritate eyes, skin, mucous membranes and respiratory tract.

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.

Effect on human microflora

Effects on human micro flora have not been proven, or are negligible.

Relevant toxicological properties

BUTANE < 0.1% BUTADIENE

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

PROPANE

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

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

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 for the product

Also take local regulations for dealing with waste into account.

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

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

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:

Subsidary 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: 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

Earlier versions

2015-02-26 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
No tox haz	Not classified as toxic
Flam Gas 1*B*	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 4*vapour*	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 Cron 1)

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.

***Liq* Press gas**

Pressurized liquefied gas: A gas which when packaged under pressure, is partially liquid at temperatures above -50 °C without specification of critical temperature

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: 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 2015-05-27.

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
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 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
H350 May cause cancer
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

Other relevant information

Editorial information

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