## Butangas 1925° 300ml

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

### 1.1. Product identifier

**Trade name/designation:**

Butangas 1925° 300ml

**Article No.:**
Y902000

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

**Use of the substance/mixture:**
Fuel

### 1.3. Details of the supplier of the safety data sheet

**Supplier:**


**KANDO Service GmbH**
Hartleitnerstraße 3
4653 Eberstalzell
Austria
**Telephone:** +43 (0) 7241 213 79
**E-mail:** msds@kando.eu


### 1.4. Emergency telephone number

Vergiftungsinformationszentrale (VIZ), Stubenring 6, 1010 Wien, 24h: 01 406 43 43, Montag - Freitag: 8 bis 16 Uhr, Tel.: 01 406 68 98 (keine medizinische Auskunft) (Only available during office hours.)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

**Classification according to Regulation (EC) No 1272/2008 [CLP]**

| Hazard classes and hazard categories | Hazard statements | Classification procedure |
|---|---|---|
| aerosol dispensers and lighters *(Aerosol 1)* | H222; H229: Extremely flammable aerosol. Pressurised container: May burst if heated. | On basis of test data. |

### 2.2. Label elements

**Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

**Hazard pictograms:**

**GHS02**
Flame

**Signal word:** Danger

| Hazard statements for physical hazards | |
|---|---|
| H222 | Extremely flammable aerosol. |
| H229 | Pressurised container: May burst if heated. |

**Supplemental hazard information:** none

| Precautionary statements Prevention | |
|---|---|
| P210 | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
| P211 | Do not spray on an open flame or other ignition source. |

| Precautionary statements Prevention | |
|---|---|
| P251 | Do not pierce or burn, even after use. |

| Precautionary statements Storage | |
|---|---|
| P410 + P412 | Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. |

### 2.3. Other hazards

**Other adverse effects:**

The product does not meet the PBT/vPvB criteria.
The product does not contain any substances with endocrine-disrupting properties.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

**Hazardous ingredients / Hazardous impurities / Stabilisers:**

| Product identifiers | Substance name<br>Classification according to Regulation (EC) No 1272/2008 [CLP] | Concentration |
|---|---|---|
| CAS No.: 106-97-8<br>EC No.: 203-448-7<br>Index No.: 601-004-00-0<br>REACH No.:<br>01-2119474691-32 | **Butane**<br>Flam. Gas 1A (H220), Press. Gas (Liq.) (H280)<br>Danger | 60 – 80<br>% |
| CAS No.: 75-28-5<br>EC No.: 200-857-2<br>Index No.: 601-004-00-0<br>REACH No.:<br>01-2119485395-27 | **isobutane**<br>Flam. Gas 1A (H220), Press. Gas (Liq.) (H280)<br>Danger<br>**Acute Toxicity Estimate**<br>ATE (inhalation, vapour) 52,000 mg/L | 25 – 40<br>% |
| CAS No.: 74-98-6<br>EC No.: 200-827-9<br>Index No.: 601-003-00-5<br>REACH No.:<br>01-2119486944-21 | **propane**<br>Flam. Gas 1A (H220), Press. Gas (Liq.) (H280)<br>Danger<br>**Acute Toxicity Estimate**<br>ATE (oral) 5,840 mg/kg<br>ATE (dermal) 13,900 mg/kg<br>ATE (inhalation, gases) > 25 ppmV<br>ATE (inhalation, vapour) ≥ 50 mg/L | 5 – 10<br>% |

*Full text of H- and EUH-phrases: see section 16.*

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

**General information:**

If unconscious but breathing normally, place in recovery position and seek medical advice. Never give anything orally to an unconscious person. If you feel unwell, seek medical advice (show this label if possible).

**Following inhalation:**

Provide fresh air. In case of respiratory tract irritation, consult a physician.

**In case of skin contact:**

Take off contaminated clothing. After contact with skin, wash immediately with plenty of water and soap. Get medical advice/attention if you feel unwell.

**After eye contact:**

Contact lenses must be removed. Rinse opened eye for several minutes under running water. Consult a doctor if symptoms persist

**Following ingestion:**

First rinse your mouth with water and spit the water out again. Drink plenty of water. Get medical advice/ attention if you feel unwell.

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

Following inhalation: High concentrations may displace normal air and cause asphyxiation due to lack of oxygen. Prolonged inhalation may cause unconsciousness and/or death.
Following skin contact: Contact with the heated product can cause burn injuries.

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

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media
**Suitable extinguishing media:**
Powder, Water mist, Carbon dioxide (CO2), alcohol resistant foam
**Unsuitable extinguishing media:**
Full water jet

### 5.2. Special hazards arising from the substance or mixture
Vapours can form explosive mixtures with air.
**Hazardous combustion products:**
In case of fire: Gases/vapours, toxic; Protect from heat and direct sunlight.

### 5.3. Advice for firefighters
Wear a self-contained breathing apparatus and chemical protective clothing. Use suitable breathing apparatus. There may be a risk of explosion in containers exposed to fire. In case of fire, cool containers with water spray.

### 5.4. Additional information
Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures
### 6.1.1. For non-emergency personnel
**Personal precautions:**
Keep unauthorised persons away. Remove persons to safety. Ventilate affected area. Avoid contact with eyes and skin. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take action to prevent static discharges.
**Protective equipment:**
Wear protective gloves/protective clothing/eye protection/face protection.
### 6.1.2. For emergency responders
**Personal protection equipment:**
Personal protection equipment: see section 8

### 6.2. Environmental precautions
Do not allow to enter into soil/subsoil. Notify emergency services in case of major spills. Prevent entry into sewers, cellars, working pits or other places where gas accumulation could be dangerous.

### 6.3. Methods and material for containment and cleaning up
**For containment:**
Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).
**Other information:**
Provide fresh air. The gas from leaking gas cylinders must evaporate outdoors. Evacuate and ventilate the building.

### 6.4. Reference to other sections
Personal protection equipment: see section 8
Disposal: see section 13

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling
### Protective measures
**Advices on safe handling:**
Wear personal protection equipment (refer to section 8). Take the necessary precautions and protective measures to ensure safe handling. Only experienced and appropriately trained persons should handle

compressed gas. Only use equipment suitable for this product, its pressure and temperature. If in doubt, please contact your gas supplier. Avoid exposure. All heat sources, including direct sunlight. No naked flames, no sparks. Remove all sources of ignition. Avoid shock and friction. 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.

### Advices on general occupational hygiene

When using do not eat, drink, smoke, sniff. Avoid contact with skin, eyes and clothes. Store separately from food. Store out of reach of children and pets. Wash hands before breaks and after work. Contaminated work clothing must not be allowed out of the workplace. Take off contaminated clothing and wash it before reuse.

## 7.2. Conditions for safe storage, including any incompatibilities

**Technical measures and storage conditions:**

Keep container tightly closed in a cool, well-ventilated place. Avoid release to the environment. Store out of reach of children and pets. Store separately from food. Keep only in the original container in a cool, well-ventilated place. All heat sources, including direct sunlight. No naked flames, no sparks. Remove all sources of ignition. Avoid shock and friction.

## 7.3. Specific end use(s)

No data available

# SECTION 8: Exposure controls/personal protection

## 8.1. Control parameters

### 8.1.1. Occupational exposure limit values

| Limit value type (country of origin) | Substance name | ① Long-term occupational exposure limit value<br>② Short-term occupational exposure limit value<br>③ Instantaneous value<br>④ Monitoring and observation processes<br>⑤ Remark |
|---|---|---|
| MAK (AT) | **Butane**<br>CAS No.: 106-97-8<br>EC No.: 203-448-7 | ① 800 ppm (1,900 mg/m³) |
| MAK (AT) | **Butane**<br>CAS No.: 106-97-8<br>EC No.: 203-448-7 | ② 1,600 ppm (3,800 mg/m³)<br>⑤ (max. 3x60 min./Schicht, Momentanwert) |
| MAK (AT) | **Butane**<br>CAS No.: 106-97-8<br>EC No.: 203-448-7 | ② 1,600 ppm (3,800 mg/m³)<br>⑤ (max. 3x60 min./SchichtMomentanwert) |
| MAK (AT) | **isobutane**<br>CAS No.: 75-28-5<br>EC No.: 200-857-2 | ② 1,600 ppm (3,800 mg/m³)<br>⑤ (max. 3x60 min./SchichtMomentanwert) |
| MAK (AT) | **isobutane**<br>CAS No.: 75-28-5<br>EC No.: 200-857-2 | ① 800 ppm (1,900 mg/m³) |
| MAK (AT) | **propane**<br>CAS No.: 74-98-6<br>EC No.: 200-827-9 | ② 2,000 ppm (3,600 mg/m³)<br>⑤ (max. 3x60 min./Schicht, Momentanwert) |
| MAK (AT) | **propane**<br>CAS No.: 74-98-6<br>EC No.: 200-827-9 | ① 1,000 ppm (1,800 mg/m³) |

### 8.1.2. Biological limit values

No data available

### 8.1.3. DNEL-/PNEC-values

No data available

### 8.2. Exposure controls

#### 8.2.1. Appropriate engineering controls

Ensure good ventilation/extraction at the workplace.

#### 8.2.2. Personal protection equipment

**Eye/face protection:**

Eye glasses with side protection EN 166

**Skin protection:**

Tested protective gloves must be worn EN ISO 374. Selection of glove material considering breakthrough times, permeation rates and degradation. The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability. The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

**Respiratory protection:**

Use appropriate respiratory protection. Filter type: AX.
The most appropriate respiratory protective equipment should be selected in consultation with the appointed safety representative, taking into account the risk assessment of the specific activity.

#### 8.2.3. Environmental exposure controls

Avoid release to the environment. For further information on ecological hazards: see section 12.

## SECTION 9: Physical and chemical properties

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

#### Appearance

**Physical state:** gaseous
**Form:** Aerosol
**Colour:** clear
**Odour:** not determined
**flammability:** No data available

#### Safety relevant basis data

| Parameter | Value | ① Method<br>② Remark |
|---|---|---|
| pH | *No data available* | |
| Melting point | *No data available* | |
| Freezing point | *No data available* | |
| Initial boiling point and boiling range | *No data available* | |
| Flash point | *No data available* | |
| Evaporation rate | *No data available* | |
| Auto-ignition temperature | *No data available* | |
| Upper/lower flammability or explosive limits | *No data available* | |
| Vapour pressure | *No data available* | |
| Vapour density | *No data available* | |
| Density | 0.58 g/cm³ | |
| Bulk density | *not applicable* | |
| Water solubility | *No data available* | |
| Dynamic viscosity | *No data available* | |
| Kinematic viscosity | *No data available* | |

### 9.2. Other information

No data available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Vapours can form explosive mixtures with air.

### 10.2. Chemical stability
Stable under normal conditions of use and storage.

### 10.3. Possibility of hazardous reactions
Release of: Gases/vapours, toxic Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

### 10.4. Conditions to avoid
Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

### 10.5. Incompatible materials
Avoid contact with: Strong acid, Bases, Oxidizing agent, Reducing agent

### 10.6. Hazardous decomposition products
Under normal conditions of storage and use, no hazardous decomposition products should be formed.

## SECTION 11: Toxicological information

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

| |
|---|
| **isobutane** CAS No.: 75-28-5 EC No.: 200-857-2 |
| **$LC_{50}$ Acute inhalation toxicity (vapour):** 52,000 mg/L 2 h (Rat) |
| **propane** CAS No.: 74-98-6 EC No.: 200-827-9 |
| **$LD_{50}$ oral:** 5,840 mg/kg (Rat) |
| **$LD_{50}$ dermal:** 13,900 mg/kg (Rabbit) |
| **$LC_{50}$ Acute inhalation toxicity (gas):** >25 ppmV 4 h (Rat) |
| **$LC_{50}$ Acute inhalation toxicity (vapour):** ≥50 mg/L 4 h (Rat) |

**Acute oral toxicity:**
Based on available data, the classification criteria are not met.
Caution: Inhalation of large quantities may cause suffocation due to lack of oxygen.

**Acute dermal toxicity:**
Based on available data, the classification criteria are not met.

**Acute inhalation toxicity:**
Based on available data, the classification criteria are not met.

**Skin corrosion/irritation:**
Based on available data, the classification criteria are not met.

**Serious eye damage/irritation:**
Based on available data, the classification criteria are not met.

**Respiratory or skin sensitisation:**
Based on available data, the classification criteria are not met.

**Germ cell mutagenicity:**
Based on available data, the classification criteria are not met.

**Carcinogenicity:**
Based on available data, the classification criteria are not met.

**Reproductive toxicity:**
Based on available data, the classification criteria are not met.

**STOT-single exposure:**
Based on available data, the classification criteria are not met.
High concentrations may displace normal air and cause asphyxiation due to lack of oxygen. Prolonged inhalation may cause unconsciousness and/or death.

**STOT-repeated exposure:**
Based on available data, the classification criteria are not met.

**Aspiration hazard:**
Based on available data, the classification criteria are not met.

**Additional information:**
No data available

### 11.2. Information on other hazards

**Endocrine disrupting properties:**

The product does not contain any substances with endocrine-disrupting properties.

## SECTION 12: Ecological information

### 12.1. Toxicity

| **propane** CAS No.: 74-98-6 EC No.: 200-827-9 |
|---|
| **$LC_{50}$:** 9,640 mg/L 4 d (fish, Pimephales promelas) |
| **$LC_{50}$:** 0.41 mg/L 4 d (fish, Oncorhynchus mykiss) |
| **$LC_{50}$:** 49.9 mg/L 4 d (fish) |
| **$EC_{50}$:** >100 mg/L (Algae/water plant, Bacteria) |
| **$EC_{50}$:** 0.17 mg/L 3 d (Algae/water plant, Selenastrum capricornutum) |
| **$EC_{50}$:** 69.43 mg/L 2 d (crustaceans, Daphnia) Calculation with the ECOSAR programme v1.00. |
| **NOEC:** 0.017 mg/L 3 d (Algae/water plant, Pseudokirchneriella subcapitata) |
| **$ErC_{50}$:** 19.37 mg/L 4 d (Algae/water plant, Algae) Calculation with the ECOSAR programme v1.00. |
| **LOEC:** 1,000 mg/L (Algae/water plant, Algae) |
| **LOEC:** 1,000 mg/L (Algae/water plant, Alge) |
| **$IC_{50}$:** 11.3 mg/L 3 d (Algae/water plant) |
| **LOEC:** 1,000 mg/L |

### 12.2. Persistence and degradability

| **propane** CAS No.: 74-98-6 EC No.: 200-827-9 |
|---|
| **Biodegradation:** Yes, rapidly |

### 12.3. Bioaccumulative potential

| **propane** CAS No.: 74-98-6 EC No.: 200-827-9 |
|---|
| **Log $K_{OW}$:** 1.09 |

### 12.4. Mobility in soil

No data available

### 12.5. Results of PBT and vPvB assessment

| **propane** CAS No.: 74-98-6 EC No.: 200-827-9 |
|---|
| **Results of PBT and vPvB assessment:** — |

The product does not meet the PBT/vPvB criteria.

### 12.6. Endocrine disrupting properties

The product does not contain any substances with endocrine-disrupting properties. The product does not have to be labelled as environmentally hazardous. Nevertheless, it cannot be ruled out that major emissions or repeated minor emissions may have a harmful effect on the environment. Avoid release to the environment.

### 12.7. Other adverse effects

No data available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation. Pressurized container: Do not pierce or burn, even after use. Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

### 13.1.1. Product/Packaging disposal

### Waste codes/waste designations according to EWC/AVV

**Waste code packaging**

| | |
|---|---|
| 15 01 04 | metallic packaging |

## Butangas 1925° 300ml

## SECTION 14: Transport information

| Land transport (ADR/RID) | Inland waterway craft (ADN) | Sea transport (IMDG) | Air transport (ICAO-TI / IATA-DGR) |
|---|---|---|---|
| **14.1. UN number or ID number** | | | |
| UN 1950 | UN 1950 | UN 1950 | UN 1950 |
| **14.2. UN proper shipping name** | | | |
| AEROSOLS | AEROSOLS | AEROSOLS | AEROSOLS |
| **14.3. Transport hazard class(es)** | | | |
|  2.1 |  2.1 |  2.1 |  2.1 |
| **14.4. Packing group** | | | |
| | | - | |
| **14.5. Environmental hazards** | | | |
| No data available | No data available | No data available | No data available |
| **14.6. Special precautions for user** | | | |
| **Classification code:** 5F<br>**Tunnel restriction code:** (D)<br>**Remark:** Transport category: 2; maximum total quantity per transport unit 333 kg or litres | **Classification code:** -<br>**Remark:** Transport category: 2; maximum total quantity per transport unit 333 kg or litres | **EmS-No.:** F-D, S-U<br>**Remark:** Transport category: 2; maximum total quantity per transport unit 333 kg or litres | **Remark:** Transport category: 2; maximum total quantity per transport unit 333 kg or litres |

### 14.7. Maritime transport in bulk according to IMO instruments
not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU legislation

**Other regulations (EU):**

Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances [Seveso-III-Directive], Hazard categories:
• P3a 'Flammable' aerosols Category 1 or 2, containing flammable gases Category 1 or 2 or flammable liquids

Named dangerous substances:
• Liquefied flammable gases, Category 1 or 2 (including liquefied petroleum gas) and natural gas

#### 15.1.2. National regulations
No data available

### 15.2. Chemical Safety Assessment
For this substance a chemical safety assessment is not required.

## SECTION 16: Other information

### 16.1. Indication of changes
No data available

### 16.2. Abbreviations and acronyms
ACGIH American Conference of Governmental Industrial Hygienists

| | |
|---|---|
| ADN | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways |
| ADR | European Agreement concerning the International Carriage of Dangerous Goods by Road |
| CAS | Chemical Abstracts Service |
| CLP | Classification, Labelling and Packaging |
| DIN | German Institute for Standardization / German Industrial Standard |
| DNEL | derived no-effect level |
| $EC_{50}$ | Effective Concentration 50% |
| EN | European Standard |
| ES | Exposure scenario |
| EWC | European Waste Catalogue |
| $IC_{50}$ | Inhibition Concentration 50 % |
| ICAO | International Civil Aviation Organization |
| IMDG | International Maritime Dangerous Goods |
| IMO | International Maritime Organization |
| ISO | International Standards Organisation |
| $LC_{50}$ | Lethal (fatal) Concentration 50% |
| $LD_{50}$ | Lethal (fatal) Dose 50% |
| MAK | Maximum concentration in the workplace air (CH) |
| NFPA | National Fire Protection Association |
| NIOSH | National Institute for Occupational Safety & Health |
| NOEC | No Observed Effect Concentration |
| OSHA | Occupational Safety & Health Administration |
| PBT | persistent and bioaccumulative and toxic |
| PNEC | Predicted No Effect Concentration |
| REACH | Registration, Evaluation and Authorization of Chemicals |
| RID | Dangerous goods regulations for transport by rail |
| TRGS | Technische Regeln für Gefahrstoffe |
| UN | United Nations |

### 16.3. Key literature references and sources for data
No data available

### 16.4. Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

| Hazard classes and hazard categories | Hazard statements | Classification procedure |
|---|---|---|
| aerosol dispensers and lighters *(Aerosol 1)* | H222; H229: Extremely flammable aerosol. Pressurised container: May burst if heated. | On basis of test data. |

### 16.5. List of relevant hazard statements and/or precautionary statements from sections 2 to 15

| Hazard statements | |
|---|---|
| H220 | Extremely flammable gas. |
| H280 | Contains gas under pressure; may explode if heated. |

### 16.6. Training advice
No data available

### 16.7. Additional information
To the best of our knowledge, the information contained herein is accurate. However, neither the above-mentioned supplier nor its subsidiaries assume any liability with regard to the correctness or completeness of the information provided. A final determination of the suitability of individual materials is the sole responsibility of the user. All materials may involve unknown risks and should be used with caution. While certain risks are described herein, we cannot guarantee that these are the only possible risks.