

Safety Data Sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)

1-Butyl-1-methylpyrrolidinium bis(trifluoromethylsulfonyl)imide

Version number: GHS 1.0

Date of compilation: 09.07.2018

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

1.1 Product identifier

| | |
|---------------------------------|---|
| Identification of the substance | 1-Butyl-1-methylpyrrolidinium bis(trifluoromethylsulfonyl)imide |
| Registration number (REACH) | unavailable |
| EC number | 606-989-0 |
| CAS number | 223437-11-4 |
| Alternative number(s) | 00316.1000 |

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

| | |
|--------------------------|---|
| Relevant identified uses | Product and process orientated research and development |
| Uses advised against | Do not use for private purposes (household) |

1.3 Details of the supplier of the safety data sheet

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1.4 Emergency telephone number

Poisoning information center Austria: +43 (0) 1 406 43 43

Emergency information service

Mo-fr 8am-4pm (CET): +43 (0) 316/ 4009- 4200

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

Caution! Substance not yet fully tested. All information refers to analogy circuits.

| Section | Hazard class | Category | Hazard class and category | Hazard statement |
|---------|---|----------|---------------------------|------------------|
| 3.1O | acute toxicity (oral) | 3 | Acute Tox. 3 | H301 |
| 3.2 | skin corrosion/irritation | 2 | Skin Irrit. 2 | H315 |
| 3.3 | serious eye damage/eye irritation | 2 | Eye Irrit. 2 | H319 |
| 3.8R | specific target organ toxicity - single exposure (respiratory tract irritation) | 3 | STOT SE 3 | H335 |

For full text of abbreviations: see SECTION 16.

2.2 Label elements

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Labelling according to Regulation (EC) No 1272/2008 (CLP)

- signal word danger

- pictograms

GHS06



- hazard statements

H301 Toxic if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

- precautionary statements

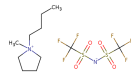
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 Call a POISON CENTRE/doctor if you feel unwell.
P330 Rinse mouth.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P501 Dispose of contents/container to industrial combustion plant.

2.3 Other hazards

of no significance

SECTION 3: Composition/information on ingredients

3.1 Substances

| | |
|---------------------------|---|
| Name of substance | 1-Butyl-1-methylpyrrolidinium bis(trifluoromethylsulfonyl)imide |
| Identifiers | |
| CAS No | 223437-11-4 |
| EC No | 606-989-0 |
| Purity | 98,5 – 99,9 % |
| Molecular formula | C ₁₁ H ₂₀ F ₆ N ₂ O ₄ S ₂ |
| Molar mass | 422,4 g/mol |
| Structural formula |  |

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

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Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. In case of respiratory tract irritation, consult a physician. Provide fresh air.

Following skin contact

Wash with plenty of soap and water.

Following eye contact

Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

See SECTION 2.

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water spray, BC-powder, Carbon dioxide (CO₂)

Unsuitable extinguishing media

Water jet

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

Nitrogen oxides (NO_x), Carbon monoxide (CO), Carbon dioxide (CO₂), Sulphur oxides (SO_x), Hydrogen fluoride (HF)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

For emergency responders

Wear adequate personal equipment. Wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

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6.3 Methods and material for containment and cleaning up

Advices on how to contain a spill

Covering of drains

Advices on how to clean up a spill

Collect spillage. Wipe up with absorbent material (e.g. cloth, fleece). Sawdust. Kieselgur (diatomite). Sand. Universal binder.

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Recommendations

Use local and general ventilation. Use only in well-ventilated areas.

- specific notes/details

Avoid contact with skin and eyes.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Store locked up. Keep container tightly closed and in a well-ventilated place. Keep away from other materials. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

- packaging compatibilities

Only packagings which are approved (e.g. acc. to ADR) may be used.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

These information are not available.

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

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Eye/face protection

Wear eye/face protection.

Skin protection

- body protection

Wear suitable protective clothing. Chemical protective clothing. Complete protective clothing.

- hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use.

- other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

| | |
|----------------|------------------------------|
| Physical state | liquid |
| Colour | colourless to lightly yellow |
| Odour | characteristic |

Other safety parameters

| | |
|---|---|
| pH (value) | not determined |
| Melting point/freezing point | not determined |
| Initial boiling point and boiling range | not determined |
| Flash point | not determined |
| Evaporation rate | not determined |
| Flammability (solid, gas) | not relevant, (fluid) |
| Explosive limits | not determined |
| Vapour pressure | not determined |
| Density | not determined |
| Vapour density | this information is not available |
| Relative density | information on this property is not available |

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| | |
|----------------------------------|------------------------------------|
| Solubility(ies) | not determined |
| Partition coefficient | |
| - n-octanol/water (log KOW) | this information is not available |
| Auto-ignition temperature | not determined |
| Viscosity | not determined |
| Explosive properties | none |
| Oxidising properties | none |
| Other information | there is no additional information |

SECTION 10: Stability and reactivity

10.1 Reactivity

Concerning incompatibilities: see below "conditions to avoid".

10.2 Chemical stability

Stable when stored under the recommended storage conditions and in the original packaging. .

10.3 Possibility of hazardous reactions

No data available.

10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

10.5 Incompatible materials

There is no additional information.

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

All information refers to analogy circuits.

Classification according to GHS (1272/2008/EC, CLP)

Acute toxicity

Toxic if swallowed.

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitisation

No data available.

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Germ cell mutagenicity

No data available.

Carcinogenicity

No data available.

Reproductive toxicity

No data available.

Specific target organ toxicity - single exposure

May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

No data available.

SECTION 12: Ecological information

12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

12.2 Persistence and degradability

Data are not available.

12.3 Bioaccumulative potential

Data are not available.

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Dispose of contents/container to industrial combustion plant.

Waste treatment-relevant information

Incineration.

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment.

Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

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Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

| | | |
|------|--|--|
| 14.1 | UN number | 2810 |
| 14.2 | Shipping name | TOXIC LIQUID, ORGANIC, N.O.S. 1-Butyl-1-methylpyrrolidinium bis(trifluoromethylsulfonyl)imide |
| 14.3 | Transport hazard class(es) | |
| | Class | 6.1 (toxic substances) |
| 14.4 | Packing group | II (substance presenting medium danger) |
| 14.5 | Environmental hazards | non-environmentally hazardous acc. to the dangerous goods regulations |
| 14.6 | Special precautions for user | |
| | | Provisions for dangerous goods (ADR) should be complied within the premises. |
| 14.7 | Transport in bulk according to Annex II of MARPOL and the IBC Code | |
| | | The cargo is not intended to be carried in bulk. |

Information for each of the UN Model Regulations

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)

| | |
|----------------------|-------------------------------|
| UN number | 2810 |
| Proper shipping name | TOXIC LIQUID, ORGANIC, N.O.S. |
| Class | 6.1 |
| Classification code | T1 |
| Packing group | II |
| Danger label(s) | 6.1 |



| | |
|-------------------------------|--------------------|
| Special provisions (SP) | 274, 614, 802(ADN) |
| Excepted quantities (EQ) | E4 |
| Limited quantities (LQ) | 100 ml |
| Transport category (TC) | 2 |
| Tunnel restriction code (TRC) | D/E |
| Hazard identification No | 60 |

International Maritime Dangerous Goods Code (IMDG)

| | |
|----------------------|-------------------------------|
| UN number | 2810 |
| Proper shipping name | TOXIC LIQUID, ORGANIC, N.O.S. |
| Class | 6.1 |
| Marine pollutant | - |
| Packing group | II |

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Danger label(s)

6.1



Special provisions (SP)

274

Excepted quantities (EQ)

E4

Limited quantities (LQ)

100 ml

EmS

F-A, S-A

Stowage category

B

International Civil Aviation Organization (ICAO-IATA/DGR)

UN number

2810

Proper shipping name

Toxic liquid, organic, n.o.s.

Class

6.1

Packing group

II

Danger label(s)

6.1



Special provisions (SP)

A3, A4, A137

Excepted quantities (EQ)

E4

Limited quantities (LQ)

1 L

SECTION 15: Regulatory information

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

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information

Abbreviations and acronyms

| Abbr. | Descriptions of used abbreviations |
|--------|---|
| ADN | Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways) |
| ADR | Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road) |
| CAS | Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances) |
| CLP | Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures |
| DGR | Dangerous Goods Regulations (see IATA/DGR) |
| EC No | The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union) |
| EINECS | European Inventory of Existing Commercial Chemical Substances |

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| Abbr. | Descriptions of used abbreviations |
|----------|---|
| ELINCS | European List of Notified Chemical Substances |
| EmS | Emergency Schedule |
| GHS | "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations |
| IATA | International Air Transport Association |
| IATA/DGR | Dangerous Goods Regulations (DGR) for the air transport (IATA) |
| ICAO | International Civil Aviation Organization |
| IMDG | International Maritime Dangerous Goods Code |
| MARPOL | International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant") |
| NLP | No-Longer Polymer |
| PBT | Persistent, Bioaccumulative and Toxic |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals |
| RID | Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail) |
| vPvB | Very Persistent and very Bioaccumulative |

Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU.

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN).

Classification procedure

All information on physical and chemical properties, except it is specially mentioned, based on literature references.

Classification is based on the tested substance as well as on relevant literature relating to the anion of the substance.

List of relevant phrases (code and full text as stated in chapter 2 and 3)

| Code | Text |
|------|-----------------------------------|
| H301 | Toxic if swallowed. |
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |
| H335 | May cause respiratory irritation. |

Disclaimer

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The data contained in this safety data sheet are based on the current knowledge and experience of proionic GmbH and do not purport to be all inclusive. The safety data sheet shall be used only as a guide. The data do not describe the products properties (product specification). Neither should any agreed property nor the suitability of the product for any specific purpose, except as mentioned, be deduced from the data contained in this safety data sheet. It is the responsibility of the recipient of the product to ensure that any proprietary rights and existing laws and legislation are observed.

Proionic GmbH shall not be held liable for any damage resulting from handling or from contact with the above product.

This safety data sheet has been compiled and is solely intended for this product – it may not be valid for this product used in combination with any material or any process