

Safety Data Sheet

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

1-Butyl-3-methyl imidazolium bis(trifluoromethylsulfonyl)imide

Version number: GHS 3.0

Date of compilation: 11.10.2023

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

1.1 Product identifier

Identification of the substance

1-Butyl-3-methyl imidazolium bis(trifluoromethylsulfonyl)imide

EC number

605-742-4

CAS number

174899-83-3

Reference number (ECHA)

02-2120785168-42-0000

Alternative name(s)

BMIM TFSI

Alternative number(s)

00216.1000

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

Relevant identified uses

Battery fluid
Product and process oriented research and development
Laboratory chemical

Uses advised against

Do not use for private purposes (household)

HS code

29332990.

1.3 Details of the supplier of the safety data sheet

proionic GmbH
Parkring 18, Trakt H/1
A-8074 Raaba-Grambach
Austria

Telephone: +43 (0) 316 4009-4200
e-mail: office@proionic.com
Website: www.proionic.com

1.4 Emergency telephone number

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

Emergency information service

Austria
This number is only available during office hours
Mo-fr 8am-4pm (CET): +43 (0) 316/ 4009- 4200

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Research chemical - research sample.

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

Self-classification. Substance not yet fully tested. All information refers to analogy circuits.

Section	Hazard class	Cat-egory	Hazard class and category	Hazard statement
3.1O	acute toxicity (oral)	3	Acute Tox. 3	H301
4.1C	hazardous to the aquatic environment - chronic hazard	3	Aquatic Chronic 3	H412

For full text of abbreviations: see SECTION 16.

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Spillage and fire water can cause pollution of watercourses.

2.2 Label elements

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

- signal word danger

- pictograms
GHS06



- hazard statements

H301 Toxic if swallowed.

H412 Harmful to aquatic life with long lasting effects.

- precautionary statements

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P273 Avoid release to the environment.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.

P330 Rinse mouth.

P501 Dispose of contents/container to industrial combustion plant.

2.3 Other hazards

Not readily biodegradable.

SECTION 3: Composition/information on ingredients

3.1 Substances

Name of substance 1-Butyl-3-methyl imidazolium bis(trifluoromethylsulfonyl)imide

Identifiers

CAS No 174899-83-3

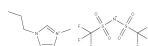
EC No 605-742-4

Purity >95 – <99,9 %

Molecular formula C₁₀H₁₅N₃F₆O₄S₂

Molar mass 419,4 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.

Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. Provide fresh air.

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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

Suitable protective 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. If substance has entered a water course or sewer, inform the responsible authority.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains

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Advice 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.

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.

- 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.

Eye/face protection

Wear eye/face protection.

Skin protection

- protective clothing - protection against liquid chemicals

Wear suitable protective clothing. Chemical protective clothing.

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- 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.

Body protection

Protective clothing against liquid chemicals.

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

Physical state	liquid
Colour	colourless
Odour	characteristic
Melting point/freezing point	not determined
Boiling point or initial boiling point and boiling range	not determined
Flammability	this material is combustible, but will not ignite readily
Lower and upper explosion limit	not determined
Flash point	not determined
Auto-ignition temperature	not determined
pH (value)	not determined
Kinematic viscosity	not determined
Solubility(ies)	

Partition coefficient

Partition coefficient n-octanol/water (log value)	not determined
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Vapour pressure	not determined
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Density and/or relative density

Density	1,442 g/cm ³ at 20 °C
Relative vapour density	information on this property is not available

Particle characteristics	not relevant (liquid)
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Other information

Information with regard to physical hazard classes	hazard classes acc. to GHS (physical hazards): not relevant
Other safety characteristics	there is no additional information

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is not reactive under normal ambient conditions.

10.2 Chemical stability

Stable under normal conditions of use.

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

Do not allow contact with air.

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 hazard classes as defined in Regulation (EC) No 1272/2008

Self-classification based on available data of 1-Ethyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide, CAS 174899-82-2.

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

Acute toxicity

Toxic if swallowed.

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Exposure route	Endpoint	Value	Species
oral	LD50	50 – 300 mg/kg	rat

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

No data available.

Reproductive toxicity

Data are not available.

Specific target organ toxicity - single exposure

Data are not available.

Specific target organ toxicity - repeated exposure

Data are not available.

Aspiration hazard

Data are not available.

11.2 Information on other hazards

There is no additional information.

SECTION 12: Ecological information

12.1 Toxicity

Harmful to aquatic life with long lasting effects.

Aquatic toxicity (acute)

No data available. Data on similar substances were used.

12.2 Persistence and degradability

No data available. Not readily biodegradable.

12.3 Bioaccumulative potential

Bioaccumulation is not expected.

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Not carried out yet.

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12.6 Endocrine disrupting properties

Information on this property is not available.

12.7 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.

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 or ID number	2810
ADR/RID/ADN	UN 2810
IMDG-Code	UN 2810
ICAO-TI	UN 2810
14.2 UN proper shipping name	
ADR/RID/ADN	TOXIC LIQUID, ORGANIC, N.O.S.
IMDG-Code	TOXIC LIQUID, ORGANIC, N.O.S.
ICAO-TI	Toxic liquid, organic, n.o.s.
Technical name	1-Butyl-3-methyl imidazolium bis(trifluoromethylsulfonyl)imide
14.3 Transport hazard class(es)	
ADR/RID/ADN	6.1
IMDG-Code	6.1
ICAO-TI	6.1
14.4 Packing group	
ADR/RID/ADN	II
IMDG-Code	II
ICAO-TI	II

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- 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 Maritime transport in bulk according to IMO instruments**
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) - additional information

Classification code	T1
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) - additional information

Marine pollutant	-
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) - additional information

Danger label(s)	6.1
	
Special provisions (SP)	A3, A4, A137
Excepted quantities (EQ)	E4
Limited quantities (LQ)	1 L

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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.

Additional information

Substance is listed in the following national inventories:

REACH (Europe)

TCSI (Taiwan)

VNECI (Vietnam)

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 relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)
ADR/RID/ADN	Agreements concerning the International Carriage of Dangerous Goods by Road/Rail/Inland Waterways (ADR/RID/ADN)
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
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
HS	Harmonized Commodity Description and Coding System (Harmonized System, drawn up by the World Customs Organisation)
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IMDG	International Maritime Dangerous Goods Code
IMDG-Code	International Maritime Dangerous Goods Code

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Abbr.	Descriptions of used abbreviations
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
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 2020/878/EU.

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

Classification procedure

Self-classification. Data on similar substances were used.

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

Code	Text
H301	Toxic if swallowed.
H412	Harmful to aquatic life with long lasting effects.

Disclaimer

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.

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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