

1-Butyl-3-methyl imidazolium trifluoromethanesulfonate

Version number: PI 4.0

Date of compilation: 09.03.2026

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 trifluoromethanesulfonate
Registration number (REACH)	unavailable
EC number	678-094-3
CAS number	174899-66-2
Reference number (ECHA)	02-2120785167-44-0000
Alternative name(s)	1-Butyl-3-methylimidazolium triflate BMIM OTf
Alternative number(s)	00204.1000, 00204.3000, 00204.6010

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
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: proionic.office@arkema.com
Website: www.proionic.com

e-mail (competent person) Dr. Markus Damm
m.damm@arkema.com

1.4 Emergency telephone number

Emergency information service Austria
This number is only available during the following of-
fice hours
Mo-Fr 8am-4pm (CET): +43 316/ 4009- 4200

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

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Research chemical - research sample.
Caution! Substance not yet fully tested.

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

Self-classification. All information refers to analogy circuits.

Safety Data Sheet

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



1-Butyl-3-methyl imidazolium trifluoromethanesulfonate

Version number: PI 4.0

Date of compilation: 09.03.2026

Section	Hazard class	Cat-egory	Hazard class and category	Hazard statement
3.10	acute toxicity (oral)	4	Acute Tox. 4	H302
3.2	skin corrosion/irritation	2	Skin Irrit. 2	H315
3.3	serious eye damage/eye irritation	2	Eye Irrit. 2	H319

For full text of abbreviations: see SECTION 16.

Additional information

None.

2.2 Label elements

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

- signal word warning

- pictograms

GHS07



- hazard statements

H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.

- precautionary statements

P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321 Specific treatment (see on this label).
P330 Rinse mouth.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
P501 Dispose of contents/container to industrial combustion plant.

2.3 Other hazards

There is no additional information.

SECTION 3: Composition/information on ingredients

3.1 Substances

Name of substance	1-Butyl-3-methyl imidazolium trifluoromethanesulfonate
IUPAC name	1H- Imidazolium , 3- Butyl -1- Methyl- , 1, 1, 1- Trifluor - Methansulfonat (1: 1)
Identifiers	
CAS No	174899-66-2
EC No	678-094-3
Purity	>95 – <99,9 %
Molecular formula	C9H15F3N2O3S

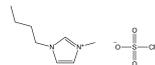
1-Butyl-3-methyl imidazolium trifluoromethanesulfonate

Version number: PI 4.0

Date of compilation: 09.03.2026

Molar mass

288,3 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. In case of respiratory tract irritation, consult a physician. Provide fresh air.

Following skin contact

Wash with plenty of soap and water. If skin irritation occurs, consult a doctor.

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. Consult a doctor.

Following ingestion

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

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**Hazardous combustion products**

May produce toxic fumes, 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**

1-Butyl-3-methyl imidazolium trifluoromethanesulfonate

Version number: PI 4.0

Date of compilation: 09.03.2026

Remove persons to safety.

For emergency responders

Wear protective equipment and avoid any contact (skin, eyes).

6.2 Environmental precautions

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

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains

Advice on how to clean up a spill

Collect spillage. Wipe up with absorbent material (e.g. cloth, fleece). Use isopropanol/ethanol to clean surfaces.

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

Contaminated surfaces must not be cleaned with compressed air due to the possible formation of aerosols. 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

Keep cool. Protect from sunlight. Keep container in a well-ventilated place.

7.3 Specific end use(s)

See SECTION 1.

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 danger-

1-Butyl-3-methyl imidazolium trifluoromethanesulfonate

Version number: PI 4.0

Date of compilation: 09.03.2026

ous substance at the specific workplace.

Eye/face protection

Wear eye/face protection.

Skin protection

- hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In case of re-use of the gloves - clean it thoroughly before take off and air it well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

- 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

Respiratory protection not required.

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	16,4 °C
Boiling point or initial boiling point and boiling range	not determined
Lower and upper explosion limit	not determined
Flash point	not determined
Auto-ignition temperature	not determined
Decomposition temperature	not determined
pH (value)	not determined
Solubility(ies)	Highly soluble in a 1:1 ratio in H ₂ O, i-PrOH, acetone
Vapour pressure	not determined

Safety Data Sheet

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



1-Butyl-3-methyl imidazolium trifluoromethanesulfonate

Version number: PI 4.0

Date of compilation: 09.03.2026

Density and/or relative density

Density	not determined
Relative vapour density	not determined

Particle characteristics	not relevant (liquid)
--------------------------	-----------------------

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

Chemically stable.

10.4 Conditions to avoid

Please keep away from acids.

10.5 Incompatible materials

Not known

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

Research chemical - research sample.

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

Self-classification. There are no available test data for this substance. Data on similar substances were used.

Acute toxicity

Harmful if swallowed.

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitisation

No data available.

Germ cell mutagenicity

No data available.

Carcinogenicity

1-Butyl-3-methyl imidazolium trifluoromethanesulfonate

Version number: PI 4.0

Date of compilation: 09.03.2026

No data available.

Reproductive toxicity

No data available.

Specific target organ toxicity - single exposure

No data available.

Specific target organ toxicity - repeated exposure

No data available.

Aspiration hazard

No data available.

11.2 Information on other hazards

There is no additional information.

SECTION 12: Ecological information

12.1 Toxicity

No data available.

Aquatic toxicity (acute)

No data available.

12.2 Persistence and degradability

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

Data are not available.

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

Waste treatment-relevant information

Incineration. Residues and used material have to be disposed to an authorized waste treatment facility.

Sewage disposal-relevant information

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

Waste treatment of containers/packagings

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.

1-Butyl-3-methyl imidazolium trifluoromethanesulfonate

Version number: PI 4.0

Date of compilation: 09.03.2026

SECTION 14: Transport information

- 14.1 UN number or ID number** not relevant
- 14.2 UN proper shipping name** not relevant
- 14.3 Transport hazard class(es)** None
- 14.4 Packing group** Not assigned
- 14.5 Environmental hazards** Non-environmentally hazardous acc. to the dangerous goods regulations
- 14.6 Special precautions for user**
There is no additional information.
- 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

Not subject to ADR, RID and ADN.

International Maritime Dangerous Goods Code (IMDG) - additional information

Not subject to IMDG.

International Civil Aviation Organization (ICAO-IATA/DGR) - additional information

Not subject to ICAO-IATA.

SECTION 15: Regulatory information

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

There is no additional information.

National regulations (Germany)

Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (Ordinance on facilities for handling substances hazardous to water) (AwSV)

Wassergefährdungsklasse, WGK 1 slightly hazardous to water
(water hazard class)

Technical instructions on air quality control (Germany)

Number	Group of substances	Class	Conc.	Mass flow	Mass concentration	Notation
5.2.5	organic substances		≥ 25 wt%	0,5 kg/h	50 mg/m ³	3)

Notation

3) a total mass flow of 0.50 kg/h or a total mass concentration of 50 mg/m³, each of which to be indicated as total carbon, shall not be exceeded (except organic particulate matter)

Storage of hazardous substances in non-stationary containers (TRGS 510) (Germany)

Storage class (LGK) 10 (combustible liquids)

Additional information

Substance is listed in the following national inventories:

1-Butyl-3-methyl imidazolium trifluoromethanesulfonate

Version number: PI 4.0

Date of compilation: 09.03.2026

TCSI (Taiwan)
VNECI (Vietnam)
C&L Inventory (Europe)

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)
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
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
IMDG	International Maritime Dangerous Goods Code
IUPAC	International Union of Pure and Applied Chemistry
LGK	Lagerklasse (storage class according to TRGS 510, Germany)
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)
TRGS	Technische Regeln für Gefahrstoffe (technical rules for hazardous substances, Germany)
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.

Classification procedure

Self-classification.

Safety Data Sheet

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



1-Butyl-3-methyl imidazolium trifluoromethanesulfonate

Version number: PI 4.0

Date of compilation: 09.03.2026

The classification is based on data of the tested substance as well as on conclusions by analogy.

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

Code	Text
H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.

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.

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