

1-Butyl-3-methylimidazolium tetrafluoroborate

Version number: PI 3.0

Date of compilation: 23.01.2025

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

1.1 Product identifier

Identification of the substance	1-Butyl-3-methylimidazolium tetrafluoroborate
Registration number (REACH)	unavailable
EC number	638-831-1
CAS number	174501-65-6
Reference number (ECHA)	02-2120785163-52-0000
Alternative name(s)	BMIM-BF4
Alternative number(s)	00203.1000, 00203.3000

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

Relevant identified uses	The product is intended for research, analysis and scientific education Scientific research and development 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

1.4 Emergency telephone number

Emergency information service	Austria This number is only available during the following 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.
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-methylimidazolium tetrafluoroborate

Version number: PI 3.0

Date of compilation: 23.01.2025

Section	Hazard class	Cat-egory	Hazard class and category	Hazard statement
3.1O	acute toxicity (oral)	4	Acute Tox. 4	H302
4.1C	hazardous to the aquatic environment - chronic hazard	3	Aquatic Chronic 3	H412

For full text of abbreviations: see SECTION 16.

Spillage and fire water can cause pollution of watercourses.

Additional information

There are no available test data for this substance.

2.2 Label elements

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

- signal word warning

- pictograms

GHS07



- hazard statements

H302

Harmful 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+P312

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

P330

Rinse mouth.

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-methylimidazolium tetrafluoroborate

Identifiers

CAS No

174501-65-6

EC No

638-831-1

Purity

95 – 99,9 %

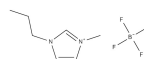
Molecular formula

C₈H₁₅BF₄N₂

Molar mass

226 g/mol

Structural formula



1-Butyl-3-methylimidazolium tetrafluoroborate

Version number: PI 3.0

Date of compilation: 23.01.2025

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.

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), Bortrifluoride (BF₃)

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

1-Butyl-3-methylimidazolium tetrafluoroborate

Version number: PI 3.0

Date of compilation: 23.01.2025

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

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. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

- 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 dangerous substance at the specific workplace.

Safety Data Sheet

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



1-Butyl-3-methylimidazolium tetrafluoroborate

Version number: PI 3.0

Date of compilation: 23.01.2025

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	colorless to yellow
Odour	no odour is perceptible
Melting point/freezing point	not determined
Boiling point or initial boiling point and boiling range	not determined
Flammability (solid, gas)	
Lower and upper explosion limit	not determined
Flash point	not determined
Auto-ignition temperature	not determined
Decomposition temperature	not relevant
pH (value)	not determined
Solubility(ies)	not determined

Safety Data Sheet

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



1-Butyl-3-methylimidazolium tetrafluoroborate

Version number: PI 3.0

Date of compilation: 23.01.2025

Partition coefficient

Partition coefficient n-octanol/water (log value)	this information is not available
---	-----------------------------------

Vapour pressure	not determined
-----------------	----------------

Density and/or relative density

Density	not determined
Relative vapour density	information on this property is not available

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.

Substance not yet fully tested. No data available.

Acute toxicity

No data available.

Harmful if swallowed.

1-Butyl-3-methylimidazolium tetrafluoroborate

Version number: PI 3.0

Date of compilation: 23.01.2025

Skin corrosion/irritation

No data available.

Serious eye damage/eye irritation

No data available.

Respiratory or skin sensitisation

No data available.

Germ cell mutagenicity

No data available.

Carcinogenicity

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

All information refers to analogy circuits.
Harmful to aquatic life with long lasting effects.

Aquatic toxicity (acute)

No data available.

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 Endocrine disrupting properties

Information on this property is not available.

12.7 Other adverse effects

Data are not available.

1-Butyl-3-methylimidazolium tetrafluoroborate

Version number: PI 3.0

Date of compilation: 23.01.2025

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.

SECTION 14: Transport information

- | | |
|---|---|
| 14.1 UN number or ID number | Not required |
| 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

Regulations should not be applied.

List of substances subject to authorisation (REACH, Annex XIV) / SVHC - candidate list

not relevant

Safety Data Sheet

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



1-Butyl-3-methylimidazolium tetrafluoroborate

Version number: PI 3.0

Date of compilation: 23.01.2025

Additional information

Substance is listed in the following national inventories:

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
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)
SVHC	Substance of Very High Concern
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).

Safety Data Sheet

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



1-Butyl-3-methylimidazolium tetrafluoroborate

Version number: PI 3.0

Date of compilation: 23.01.2025

Classification procedure

Self-classification.

All information refers to analogy circuits.

List of relevant phrases

Code	Text
H302	Harmful 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.

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