

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

Version number: GHS 2.0

Date of compilation: 2019-05-10
First version: 2018-11-13

SECTION 1: Identification

1.1 Product identifier

Identification of the substance

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

CAS number

174899-82-2

Alternative name(s)

EMIM NTf2
EMIM TFSI

Alternative number(s)

00116.1000, 00116.2000, 00116.3000

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

Relevant identified uses

Product and process orientated research and development
Laboratory chemical
Battery fluid

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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Telephone: +43 (0) 316 4009-4200
Telefax: +43 (0) 316 4009-4228
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

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

SECTION 2: Hazard(s) identification

2.1 Classification of the substance or mixture

The classification is based on tested substance.

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Self-classification.

Section	Hazard class	Cat-egory	Hazard class and category	Hazard state-ment
A.10	acute toxicity (oral)	3	Acute Tox. 3	H301

For full text of abbreviations: see SECTION 16.

2.2 Label elements

Labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

- signal word danger

- pictograms

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GHS06



- hazard statements

H301 Toxic if swallowed.

- precautionary statements

P264 Wash thoroughly after handling.

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

P301+P310 If swallowed: Immediately call a poison center/doctor.

P330 Rinse mouth.

P405 Store locked up.

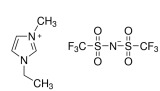
P501 Dispose of contents/container to industrial combustion plant.

2.3 Other hazards

Not readily biodegradable.

SECTION 3: Composition/information on ingredients

3.1 Substances

Name of substance	1-Ethyl-3-methyl imidazolium bis(trifluoromethylsulfonyl)imide
Identifiers	
CAS No	174899-82-2
Purity	≥98 %
Molecular formula	C ₈ H ₁₁ F ₆ N ₃ O ₄ S ₂
Molar mass	391.3 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. 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.

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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: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water spray, Alcohol resistant foam, 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), Sulfur 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 vapors/dust/aerosols/gases.

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

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.

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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 the Dangerous Goods Regulations) 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)

Wear personal protective equipment/face protection.

Eye/face protection

Wear eye/face protection.

Skin protection

- protective clothing - protection against liquid chemicals

Wear suitable protective clothing. Chemical 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.

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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
Color	colorless
Odor	characteristic

Other safety parameters

pH (value)	not determined
Melting point/freezing point	-18 -- -16 °C at 1,008 hPa (EU A.1; OECD 102)
Initial boiling point and boiling range	no boilingpoint according to OECD103
Flash point	337.5 °C at 100.8 kPa (EU A.9)
Evaporation rate	not determined
Flammability (solid, gas)	not relevant, (fluid)
Explosive limits	not determined
Vapor pressure	0.000000041 Pa at 20 °C (EU A.4; OECD 104)
Density	1.52 g/cm ³ at 20 °C (OECD 109)
Vapor density	this information is not available
Solubility(ies)	not determined
- water solubility	21 g/l at 25 °C, OECD 105

Partition coefficient

- n-octanol/water (log KOW)	-0.69 (pH value: 6.1, 25 °C) (OECD 117)
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Auto-ignition temperature	not determined
Decomposition temperature	454 °C (TGA onset)
Viscosity	not determined
Explosive properties	none
Oxidizing properties	none

Other information

Surface tension	38.9 mN _m (20 °C) (EU A.5; OECD 115)
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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 toxicological effects

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Acute toxicity

Toxic if swallowed.

- classification procedure

The classification is based on tested substance. OECD 423.

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

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

The classification is based on tested substance. OECD 439.

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Serious eye damage/eye irritation

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

- classification procedure

The classification is based on tested substance. OECD 492.

Respiratory or skin sensitization

Shall not be classified as a respiratory or skin sensitizer.

- classification procedure

The classification is based on tested substance. OECD 442C; OECD 442D.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

- classification procedure

The classification is based on tested substance. OECD 471.

Carcinogenicity

Data are not 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.

SECTION 12: Ecological information

12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

Aquatic toxicity (acute)

Endpoint	Value	Species	Method	Exposure time
EC50	>110.1 mg/l	daphnia magna	EU C.2; OECD 202	48 h
EC50	13.17 mg/l	algae	EU C.3; OECD 201	72 h

12.2 Persistence and degradability

Process	Degradation rate	Time	Method
carbon dioxide generation	1 %	28 d	EU C.29; OECD 310

12.3 Bioaccumulative potential

Bioaccumulation is not expected.

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n-octanol/water (log KOW)	-0.69 (pH value: 6.1, 25 °C) (OECD 117)
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12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Not carried out yet.

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/packages

Only packagings which are approved (e.g. acc. to DOT) 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	2810	
14.2 UN proper shipping name		1-Ethyl-3-methyl imidazolium 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		There is no additional information.
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

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Transport of dangerous goods by road or rail (49 CFR US DOT)

Index number	2810
Proper shipping name	Toxic liquid, organic, n.o.s.
- particulars in the shipper's declaration	UN2810, Toxic liquid, organic, n.o.s., (1-Ethyl-3-methyl imidazolium bis(trifluoromethylsulfonyl)imide), 6.1, II
Class	6.1
Packing group	II
Danger label(s)	6.1



Special provisions (SP)	IB2, T11, TP2, TP13, TP27
ERG No	153

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
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

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SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

Not relevant.

National regulations (Germany)

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

Wassergefährdungsklasse, WGK 2 obviously hazardous to water
(water hazard class)

Industry or sector specific available guidance(s)

NPCA-HMIS® III

Hazardous Materials Identification System. American Coatings Association.

NFPA® 704

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

15.2 Chemical Safety Assessment

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

SECTION 16: Other information, including date of preparation or last revision

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
49 CFR US DOT	49 CFR § 40 U.S. Department of Transportation
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
DGR	Dangerous Goods Regulations (see IATA/DGR)
DOT	Department of Transportation (USA)
EmS	Emergency Schedule
ERG No	Emergency Response Guidebook - Number
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")
NPCA-HMIS® III	National Paint and Coatings Association: Hazardous Materials Identification System - HMIS® III, Third Edition
OSHA	Occupational Safety and Health Administration (United States)
PBT	Persistent, Bioaccumulative and Toxic
vPvB	Very Persistent and very Bioaccumulative

Key literature references and sources for data

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OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

Transport of dangerous goods by road or rail (49 CFR US DOT).

Classification procedure

The classification is based on tested substance.

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

Code	Text
H301	Toxic if swallowed.

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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