1-Ethyl-3-methylimidazolium methansulfonate

Version number: GHS 3.0 Revision: 28.09.2023

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

1.1 Product identifier

Identification of the substance	1-Ethyl-3-methylimidazolium methansulfonate
Registration number (REACH)	01-2119911647-35-XXXX
EC number	604-453-0
CAS number	145022-45-3
Reference number (ECHA)	02-2119895613-27-0000
Alternative name(s)	EMIM Methansulfonate EMIM MeSO3
Alternative number(s)	00101.2000, 00101.3000, 00101.4000

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

Relevant identified uses	Industrial uses Product and process oriented research and development Laboratory chemical Industrial use
Uses advised against	Do not use for products which come into contact with foodstuffs 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

Emergency telephone number	Poisoning information center Austria: +43 (0) 1 406 43 43
Emergency information service	Austria 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)

This classification is based on tested substance.

Section	Hazard class	Category	Hazard class and category	Hazard statement
3.4S	skin sensitisation	1B	Skin Sens. 1B	H317
4.1C	hazardous to the aquatic environment - chronic hazard	3	Aquatic Chronic 3	H412

For full text of abbreviations: see SECTION 16.

The most important adverse physicochemical, human health and environmental effects

Spillage and fire water can cause pollution of watercourses.

2.2 Label elements

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

- signal word warning

- pictograms

GHS07

- hazard statements

H317	May cause an allergic skin reaction.
H412	Harmful to aquatic life with long lasting effects.

- precautionary statements

P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P321	Specific treatment (see on this label).
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P363	Wash contaminated clothing before reuse.
P501	Dispose of contents/container to industrial combustion plant.

2.3 Other hazards

Warning.

Endocrine disrupting properties

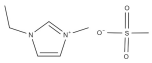
Does not contain an endocrine disruptor (EDC) in a concentration of ≥ 0,1%.

SECTION 3: Composition/information on ingredients

3.1 Substances

Name of substance	1-Ethyl-3-methylimidazolium methansulfonate
IUPAC name	3-Ethyl-1-methyl-1H-imidazolium methanesulfonate (1:1)

Identifiers

CAS No	145022-45-3
Purity	>95 – <99,9 %
Molecular formula	C7H14N2O3S
Molar mass	206,3 $^{g}/_{mol}$
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. Call a physician in any case.

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 2.2.

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water, Foam, Alcohol resistant foam, ABC-powder

Unsuitable extinguishing media

Water jet

5.2 Special hazards arising from the substance or mixture

Under certain conditions in case of fire other hazardous combustion products may be generated.

Hazardous combustion products

Nitrogen oxides (NOx), Carbon dioxide (CO2), Sulphur oxides (SOx), May produce toxic fumes of carbon monoxide if burning

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Wear self-contained breathing apparatus. 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 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

Use of adsorbent materials. Absorbent material (e.g. sand, diatomaceous earth, acid binder, universal binder, sawdust, etc.).

Other information relating to spills and releases

For removal of spilled product always wear personal protective equipment. 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 only in well-ventilated areas. Handle and open container with care.

- specific notes/details

Contaminated surfaces must not be cleaned with compressed air.

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 only in the original container in a cool, well-ventilated place.

Maintaining of the integrity of the substance or mixture

Protect from moisture. Product is hygroscopic.

7.3 Specific end use(s)

The product must be used only for the purposes specified by the manufacturer (see above).

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)

this information is not available

8.2 Exposure controls

Appropriate engineering controls

Personal protective equipment (PPE) for normal use.

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

- hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374.

- 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 insufficient ventilation, wear suitable respiratory equipment.

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	solid (solidified melt) or liquid Tends to form a supercooled melt - can crystallize spontaneously at temperatures < 33 °C
Colour	yellow
Odour	faintly perceptible
Melting point/freezing point	33 °C
Boiling point or initial boiling point and boiling range	not determined
Lower and upper explosion limit	not determined
Flash point	not applicable

Auto-ignition temperature	not determined
pH (value)	not determined
Kinematic viscosity	not relevant

Solubility(ies)

Water solubility	miscible in any proportion
- n-octanol/water (log KOW)	-3,2 (pH value: 6, 23 °C)

Vapour pressure	0 hPa at 150,4 °C

Density and/or relative density

Density	1,25 $^{g}/_{cm^3}$ at 20 °C
Relative vapour density	information on this property is not available

Particle characteristics	no data available

Other information

Information with regard to physical hazard classes	hazard classes acc. to GHS (physical hazards): not relevant

Other safety characteristics

Miscibility	Completely miscible with water.

SECTION 10: Stability and reactivity

10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

10.2 Chemical stability

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

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

Protect from moisture.

10.5 Incompatible materials

Acids, Bases, Oxidisers, Reducing agents

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

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

Acute toxicity

Shall not be classified as acutely toxic. May be harmful if swallowed.

Acute toxicity				
Exposure route	**Endpoint**	**Value**	**Species**	**Method**
oral	LD50	>2.000 $^{mg}/_{kg}$	rat	OECD 423

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

May cause an allergic skin reaction.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

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

Harmful to aquatic life.

Aquatic toxicity (acute)

Aquatic toxicity (acute)

Endpoint	Value	Species	Exposure time
EC50	65,7 $^{mg}/_{l}$	water flea (Daphnia)	48 h
EC100	220 $^{mg}/_{l}$	water flea (Daphnia)	48 h
EC0	22 $^{mg}/_{l}$	water flea (Daphnia)	48 h
ErC50	40,6 $^{mg}/_{l}$	algae	72 h

Aquatic toxicity (chronic)

May cause long-term adverse effects in the aquatic environment.

Aquatic toxicity (chronic)

Endpoint	Value	Species	Exposure time
EC50	440 $^{mg}/_{l}$	microorganisms	180 min
EC10	62 $^{mg}/_{l}$	microorganisms	180 min
EC20	120 $^{mg}/_{l}$	microorganisms	180 min

12.2 Persistence and degradability

Process of degradability

Process	Degradation rate	Time
DOC removal	90 – 100 %	28 d

12.3 Bioaccumulative potential

n-octanol/water (log KOW)	-3,2 (pH value: 6, 23 °C)

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of ≥ 0,1%.

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

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 subject to transport regulations
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

Any relevant .

Additional information

Substance is listed in the following national inventories:
REACH (Europe)
TCSI (Taiwan)
VNECI (Vietnam)

15.2 Chemical safety assessment

For this substance NO chemical safety assesment has been carried out.

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)
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
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
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
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)

Abbr.	Descriptions of used abbreviations
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

The classification and labeling is based on data of the tested substance.

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

Code	Text
H317	May cause an allergic skin reaction.
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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