

1-Ethyl-3-methylimidazolium methansulfonate

Version number: PI 4.0

Revision: 15.01.2025

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 MeSO ₃ |
| 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

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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 | 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)

Classification is based on test results.

| Section | Hazard class | Cat-egory | Hazard class and category | Hazard statement |
|---------|--------------------|-----------|---------------------------|------------------|
| 3.4S | skin sensitisation | 1B | Skin Sens. 1B | H317 |

1-Ethyl-3-methylimidazolium methansulfonate

Version number: PI 4.0

Revision: 15.01.2025

| Section | Hazard class | Cat-egory | Hazard class and category | Hazard statement |
|---------|---|-----------|---------------------------|------------------|
| 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.

P273

Avoid release to the environment.

P280

Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352

IF ON SKIN: Wash with plenty of soap and water.

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

There is no additional information.

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 %

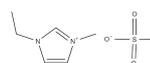
Molecular formula

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 (NO_x), Carbon dioxide (CO₂), Sulphur oxides (SO_x), 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.

1-Ethyl-3-methylimidazolium methansulfonate

Version number: PI 4.0

Revision: 15.01.2025

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.

1-Ethyl-3-methylimidazolium methansulfonate

Version number: PI 4.0

Revision: 15.01.2025

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 relevant (solid) |
| 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 |

1-Ethyl-3-methylimidazolium methansulfonate

Version number: PI 4.0

Revision: 15.01.2025

Density and/or relative density

| | |
|--------------------------------|---------------------------------|
| Density | 1,25 g/cm ³ at 20 °C |
| Relative vapour density | not relevant (solid) |

| | |
|---------------------------------|-------------------|
| 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 |

1-Ethyl-3-methylimidazolium methansulfonate

Version number: PI 4.0

Revision: 15.01.2025

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 |

1-Ethyl-3-methylimidazolium methansulfonate

Version number: PI 4.0

Revision: 15.01.2025

| Aquatic toxicity (chronic) | | | |
|----------------------------|----------|----------------|---------------|
| Endpoint | Value | Species | Exposure time |
| 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

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

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 |

1-Ethyl-3-methylimidazolium methansulfonate

Version number: PI 4.0

Revision: 15.01.2025

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

Not 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 intérieure (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 |

1-Ethyl-3-methylimidazolium methansulfonate

Version number: PI 4.0

Revision: 15.01.2025

| Abbr. | Descriptions of used abbreviations |
|----------|---|
| 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) |
| 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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