Safety Data Sheet

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

1-Ethyl-3-methylimidazolium ethylsulfate

Version number: GHS 3.0 Revision: 10.10.2023

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

1.1 Product identifier

Identification of the substance	**1-Ethyl-3-methylimidazolium ethylsulfate**
Registration number (REACH)	01-0000019470-74-xxxx
EC number	460-100-9
CAS number	342573-75-5
Reference number (ECHA)	02-2120743396-49-0000
Alternative name(s)	EMIM-EtSO4, 3-ethyl-1-methyl-1H-imidazol-3-ium ethyl sulfate
Alternative number(s)	00129.3000, 00129.4000

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

Relevant identified uses	Product and process oriented research and development Laboratory and analytical use 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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Emergency information service	Mo-fr 8am-4pm (CET): +43 (0) 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

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

This substance does not meet the criteria for classification.

2.2 Label elements

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

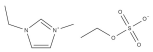
Not required

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 ethylsulfate
IUPAC name	3-ethyl-1-methyl-1H-imidazol-3-ium ethyl sulfate
Identifiers	
REACH Reg. No	01-0000019470-74-xxxx
CAS No	342573-75-5
EC No	460-100-9
Purity	>98 %
Molecular formula	C8H16N2O4S
Molar mass	236.3 $^{g}/_{mol}$
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

Provide fresh air. If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions.

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. In all cases of doubt, or when symptoms persist, seek medical advice.

Following ingestion

Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. In all cases of doubt, or when symptoms persist, seek medical advice.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date.

4.3 Indication of any immediate medical attention and special treatment needed

None

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Foam, BC-powder, Carbon dioxide (CO2)

Unsuitable extinguishing media

For this substance no limitations of extinguishing agents are given

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

Nitrogen oxides (NOx), Carbon monoxide (CO), Carbon dioxide (CO2), Sulphur oxides (SOx), Notice:, The mentioned substances/groups of substances can be released in case of fire., Under certain conditions, other hazardous combustion products may be generated during combustion

5.3 Advice for firefighters

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.

Special protective equipment for firefighters

Self-contained breathing apparatus (SCBA)

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Take precautions, which are usual when handling chemicals. For removal of spilled product always wear personal protective equipment.

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.

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

Wipe up with absorbent material (e.g. cloth, fleece). Use water for subsequent cleaning.

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

Use only in well-ventilated areas. Contaminated surfaces must not be cleaned with compressed air due to the possible formation of aerosols.

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. Separate storage of work clothes.

7.2 Conditions for safe storage, including any incompatibilities

Store upright. Keep only in the original container in a cool, well-ventilated place. Containers which are opend must be carefully resealed and kept upright to prevent leakage. 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 limits for this substance are not known.

Human health values

Relevant DNELs and other threshold levels

Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
DNEL	219 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
DNEL	238.9 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
DNEL	54 mg/m³	human, inhalatory	consumer (private households)	chronic - systemic effects
DNEL	119.4 mg/kg bw/day	human, dermal	consumer (private households)	chronic - systemic effects
DNEL	25 mg/kg bw/day	human, oral	consumer (private households)	chronic - systemic effects

Environmental values

Relevant PNECs and other threshold levels

End-point	Threshold level	Organism	Environmental compartment	Exposure time
PNEC	1 mg/l	microorganisms	sewage treatment plant (STP)	short-term (single instance)
PNEC	1 mg/l	aquatic organisms	freshwater	short-term (single instance)
PNEC	0.1 mg/l	aquatic organisms	marine water	short-term (single instance)
PNEC	1 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)

Relevant PNECs and other threshold levels				
End-point	Threshold level	Organism	Environmental compart-ment	Exposure time
PNEC	4.39 $^{mg}/_{kg}$	aquatic organisms	freshwater sediment	short-term (single instance)
PNEC	0.439 $^{mg}/_{kg}$	aquatic organisms	marine sediment	short-term (single instance)
PNEC	0.291 $^{mg}/_{kg}$	terrestrial organisms	soil	short-term (single instance)

8.2 Exposure controls

Appropriate engineering controls

General ventilation. General industrial hygiene practice. Take precautions, which are usual when handling chemicals.

Individual protection measures (personal protective equipment)

The individual protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the handled substances.

Eye/face protection

Wear eye protection.

Skin protection

- hand protection

Check leak-tightness/impermeability prior to use. Chemical protection gloves are suitable, which are tested according to EN 374.
Suitable materials for longer, direct contact:.
Protection index 6 - corresponding to > 480 minutes permeation time. Butyl rubber - 0.7 mm layer thickness.
Nitrile rubber - 0.4 mm layer thickness.
Suitable materials for short term contact:.
At least protection index 2 - corresponding to > 30 minutes permeation time. Chloroprene rubber - 0.5 mm layer thickness.

- other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Respiratory protection

Breathing apparatus at aersosol formation is absolutely necessary. Und in case of possible exposure to degradation products use a suitable 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

Physical state	liquid (viscous)
Colour	light yellow
Odour	mild sweet
Melting point/freezing point	-55 – -53 °C
Boiling point	no boilingpoint according to OECD103
Flammability	non-combustible
Lower and upper explosion limit	not determined
Flash point	176 °C (closed cup)
Auto-ignition temperature (liquids and gases)	405 °C at 1,008 hPa (EU A.15)
Decomposition temperature	340 °C (OECD 113)
pH (value)	7.9 (in aqueous solution: 100 $^{g}/_{l}$, 20 °C) (DIN 19268)
Kinematic viscosity	98.6 $^{mm^2}/_{s}$ at 20 °C 39.5 $^{mm^2}/_{s}$ at 40 °C (DIN 51562)

Solubility(ies)

Water solubility	completely miscible with water

Partition coefficient

Partition coefficient n-octanol/water (log value)	-2.6 (pH value: 6.7, 23 °C)

Vapour pressure	<0 hPa at 20 °C

Density and/or relative density

Density	1.24 $^{g}/_{cm^3}$ at 20 °C (OECD 109)
Relative vapour density	information on this property is not available

Particle characteristics	not relevant (liquid)

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9.2 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.
Surface tension	72 $^{mN}/_{m}$ (OECD 115)

SECTION 10: Stability and reactivity

10.1 Reactivity

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

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

Possible hazardous reactions in presence of mentioned substances to avoid.

10.4 Conditions to avoid

Protect from moisture.

10.5 Incompatible materials

Acids

10.6 Hazardous decomposition products

Possible decomposition products: Sulphuric acid. 1-Ethyl-1-H-imidazole, 1-Methylimidazole. 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)

This substance does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

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-Richtlinie 423
dermal	LD50	>2,000 $^{mg}/_{kg}$	rat	OECD-Richtlinie 402

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin. OECD-method 404.

Serious eye damage/eye irritation
Shall not be classified as seriously damaging to the eye or eye irritant. OECD-method 405.

Respiratory or skin sensitisation
Does not have a skin-sensitizing effect. OECD-method 429.

Germ cell mutagenicity
Shall not be classified as germ cell mutagenic. OECD-method 471.

Carcinogenicity
No data available.

Reproductive toxicity
Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure
The classification criteria for this hazard class are not met.

Specific target organ toxicity - repeated exposure
The classification criteria for these hazard classes are not met.

Aspiration hazard
Not applicable.

11.2 Information on other hazards
There is no additional information.

SECTION 12: Ecological information

12.1 Toxicity
Shall not be classified as hazardous to the aquatic environment.

Aquatic toxicity (acute)

Endpoint	Value	Species	Exposure time
LC50	>100 $^{mg}/_{l}$	fish	96 h
EC50	>100 $^{mg}/_{l}$	aquatic invertebrates	48 h
ErC50	>100 $^{mg}/_{l}$	algae	72 h

Aquatic toxicity (chronic)

Endpoint	Value	Species	Exposure time
EC50	>100 $^{mg}/_{l}$	microorganisms	30 min

12.2 Persistence and degradability

Biodegradation

Poorly biodegradable.

Process of degradability		
Process	**Degradation rate**	**Time**
carbon dioxide generation	3 %	28 d

12.3 Bioaccumulative potential

Bioaccumulation is not expected.

n-octanol/water (log KOW)	-2.6 (pH value: 6.7, 23 °C)
BOD5/COD	0.3

12.4 Mobility in soil

Data refer to dissociated substance.
Does not evaporate into the atmosphere - binding to solid soil phase is possible.

Henry's law constant	0.001 $^{Pa\ m^3}/_{mol}$ at 20 °C

12.5 Results of PBT and vPvB assessment

This article does not meet the criteria for classification.

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

Incineration.

Sewage disposal-relevant information

Do not empty into drains.

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 assigned
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

No data available.

Information for each of the UN Model Regulations

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN) - additional information

Not assigned

International Maritime Dangerous Goods Code (IMDG) - additional information

Not assigned

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

Not assigned

SECTION 15: Regulatory information

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

There is no additional information.

Additional information

Substance is listed in the following national inventories:
AICS (Australia)
NDSL (Canada)
IECSC (China)
EINECS/ELINCS/NLP (Europe)
REACH (Europe)
TCSI (Taiwan)
TSCA (United States)
AREC (South Korea)
SWISS (Switzerland)
VNECI (Vietnam)

15.2 Chemical safety assessment

For this substance a chemical safety assessment is not required.

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)
BOD	Biochemical Oxygen Demand
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
COD	Chemical oxygen demand
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
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
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
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
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals

Abbr.	Descriptions of used abbreviations
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

Based on tested substance.

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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