Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 28.01.2024 Version number 9 (replaces version 8) Revision: 26.01.2024

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

1.1 Product identifier

Trade name: LiTFSI:PYR14TFSI 1:9 (mol.)

Article number: E079

1.2 Relevant identified uses of the substance or mixture and uses advised against No other important information available.
- Sector of Use SU24 Scientific research and development
- Product category PC21 Laboratory chemicals
Application of the substance / the mixture This product is intended for the exclusive use of Research and Development.

1.3 Details of the supplier of the safety data sheet
Manufacturer/Supplier:
Solvionic SA
11 chemin des Silos
31100 TOULOUSE
FRANCE
✆ : +33 (0).32.26.20.20
✉: contact@solvionic.com
Further information obtainable from: Department of Regulatory affairs

1.4 Emergency telephone number:
- United Kingdom: Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust, +44 20 7188 7188.
- Ireland: National Poisons Information Centre Beaumont Hospital, +353 1 809 2566 (Healthcare professionals24/7), +353 1 809 2166 (public, 8am - 10pm, 7/7).
- France ORFILA (INRS): +33 (0)1.45.42.59.59.
- Belgique, Belgie/Belgium: Centre Anti-Poisons/Antigifcentrum c/o Hôpital Central de la Base - Reine Astrid Rue Bruyn 1 - 1120 Bruxelles/Brussel. Toutes les questions urgentes concernant une intoxication: 070 245 245 (gratuit, 24/7), si pas accessible 02 264 96 30 (tarif normal). Alle dringende vragen over vergiftigingen: 070 245 245 (gratis, 24/7), of indien onbereikbaar tel. 02 264 96 30 (normaal tarief).
- Sverige/ Sweden: GiftinformationscentralenBox 60 500 : 112 – begär Giftinformation ,+46 10 456 6700 (Från utlandet)
- Ελλάδα / Greece: Poisons Information Centre Children's Hospital P&A Kyriakou, +30 21 07 79 37 77.
- Italia/Italy: Centro Antiveleni di Roma CAV Policlinico "A. Gemelli", Dipartimento di Tossicologia Clinica Universita Cattolica del Sacro Cuore, +39 06 305 4343.
- España/ Spain: Servicio de Información Toxicológica Instituto Nacional de Toxicología y Ciencias Forenses, Departamento de Madrid, +34 91 562 04 20 (solo emergencias toxicológicas), Información en español (24h/365 días).
- Nederland/ Netherlands (NVIC): Uitsluitend bestemd om professionele hulpverleners te informeren bij acute vergiftigingen, +31 (0)88 755 8000.
- Norge/ Norway: Giftinformasjonen: +47 22 59 13 00.

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SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008

Acute Tox. 4	H302 Harmful if swallowed.
Skin Corr. 1B	H314 Causes severe skin burns and eye damage.
Eye Dam. 1	H318 Causes serious eye damage.
STOT RE 2	H373 May cause damage to the central nervous system and the peripheral nervous system through prolonged or repeated exposure. Route of exposure: Oral.

2.2 Label elements
Labelling according to Regulation (EC) No 1272/2008 The product is classified and labelled according to the CLP regulation.

Hazard pictograms

GHS05 GHS07 GHS08

Signal word Danger
Hazard-determining components of labelling:
lithium bis(trifluoromethylsulfonyl)imide

Hazard statements
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.

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H373 May cause damage to the central nervous system and the peripheral nervous system through prolonged or repeated exposure. Route of exposure: Oral.

Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

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SECTION 3: Composition/information on ingredients

3.2 Mixtures

- Description:
Mixture of substances listed below with nonhazardous additions.
Mixture: consisting of the following components.

- Dangerous components:		
CAS: 223437-11-4 EC number: 606-989-0	1-Butyl-1-methylpyrrolidinium bis(trifluoromethanesulfonyl)imide Skin Irrit. 2, H315; Eye Irrit. 2, H319	>60–≤95%
CAS: 90076-65-6 ELINCS: 415-300-0 Index number: 616-124-00-9	lithium bis(trifluoromethylsulfonyl)imide; Lithium salt Acute Tox. 3, H301; Acute Tox. 3, H311; STOT RE 2, H373; Skin Corr. 1B, H314; Aquatic Chronic 3, H412	>10–≤25%

- Additional information: For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- General information:
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
. After inhalation: In case of unconsciousness place patient stably in side position for transportation.
. After skin contact: Immediately wash with water and soap and rinse thoroughly.
. After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
. After swallowing:
Call for a doctor immediately.
Drink plenty of water and provide fresh air. Call for a doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media
. Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions.

5.2 Special hazards arising from the substance or mixture During heating or in case of fire poisonous gases are produced.

5.3 Advice for firefighters
. Protective equipment: No special measures required.

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SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Mount respiratory protective device.
Wear protective equipment. Keep unprotected persons away.
Use individual protective gear.

6.2 Environmental precautions:
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.

6.3 Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralising agent.

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Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.

6.4 Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

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SECTION 7: Handling and storage

7.1 Precautions for safe handling
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
. Information about fire - and explosion protection: Keep respiratory protective device available.

7.2 Conditions for safe storage, including any incompatibilities Shelf Life 12 months sealed.
. Storage:
Requirements to be met by storerooms and receptacles: No special requirements.
Information about storage in one common storage facility: Not required.
Further information about storage conditions: Keep container tightly sealed.
Maximum storage temperature: Store at room temperature, not exceeding 35°C.

7.3 Specific end use(s) No further relevant information available.

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

- Ingredients with limit values that require monitoring at the workplace:	
CAS: 90076-65-6 lithium bis(trifluoromethylsulfonyl)imide	
OEL (Sweden)	Short-term value: 0,02 mg/m³ som Li; inhalerbar fraktion

. Additional information: The lists valid during the making were used as basis.

8.2 Exposure controls
Appropriate engineering controls No further data; see section 7.
Individual protection measures, such as personal protective equipment
. General protective and hygienic measures:
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
. Respiratory protection:
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
Hand protection

Protective gloves

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374.
Material of gloves
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
Butyl rubber, BR
Fluorocarbon rubber (Viton)
Nitrile rubber, NBR
Chloroprene rubber (Neopren)
Penetration time of glove material
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
Eye/face protection

Tightly sealed goggles

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. Body protection: Use protective suit.

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- General Information	
Physical state	Liquid
Color:	Colorless to light yellow
. Odor:	Not determined.
. Odor threshold:	Not determined.
. Melting point/freezing point:	Undetermined.
Boiling point or initial boiling point and boiling range	Undetermined.
Flammability	Not applicable.
Lower and upper explosion limit	
. Lower:	Not determined.
. Upper:	Not determined.
- Flash point:	Not applicable.
. Decomposition temperature:	Not determined.
pH	Not determined
. at 20°C:	1,645 mS/cm
. at 25°C:	1,807 mS/cm
- Viscosity:	
Kinematic viscosity	Not determined.
Viscosity at 25 °C (77 °F)	
. Dynamic:	Not determined.
Solubility	
. water:	Fully miscible.
Partition coefficient n-octanol/water (log value)	Not determined.
- Vapour pressure:	Not determined.
Density and/or relative density	
- Density at 20 °C:	1,415 g/cm³
. Relative density	Not determined.
. Vapour density	Not determined.

9.2 Other information

. Appearance:	
Form:	Liquid
Important information on protection of health and environment, and on safety.	
- Auto-ignition temperature:	Product is not selfigniting.
- Explosive properties:	Product does not present an explosion hazard.
- Solvent content:	
. VOC (EC)	0,00 %
- Change in condition	
. Evaporation rate	Not determined.

Information with regard to physical hazard classes	
Explosives	Void
Flammable gases	Void
Aerosols	Void
Oxidising gases	Void
Gases under pressure	Void
Flammable liquids	Void
Flammable solids	Void
Self-reactive substances and mixtures	Void
Pyrophoric liquids	Void
Pyrophoric solids	Void
Self-heating substances and mixtures	Void
Substances and mixtures, which emit flammable gases in contact with water	Void
Oxidising liquids	Void
Oxidising solids	Void
Organic peroxides	Void
Corrosive to metals	Void
Desensitised explosives	Void

SECTION 10: Stability and reactivity

10.1 Reactivity No further relevant information available.

10.2 Chemical stability

Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

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10.3 Possibility of hazardous reactions No dangerous reactions known.

10.4 Conditions to avoid No further relevant information available.

10.5 Incompatible materials: Strong oxidizer and strong acid and base.

10.6 Hazardous decomposition products: No dangerous decomposition products known.

*
SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008
Acute toxicity Harmful if swallowed.

LD/LC50 values relevant for classification:		
ATE (Acute Toxicity Estimates)		
Oral	LD50	746 mg/kg
Dermal	LD50	2.239 mg/kg

CAS: 90076-65-6 lithium bis(trifluoromethylsulfonyl)imide		
Oral	LD50	100 mg/kg (ATE)
Dermal	LD50	300 mg/kg (ATE)

. Skin corrosion/irritation Causes severe skin burns and eye damage.
. Serious eye damage/irritation Causes serious eye damage.

- Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
. Germ cell mutagenicity Based on available data, the classification criteria are not met.
. Carcinogenicity Based on available data, the classification criteria are not met.
. Reproductive toxicity Based on available data, the classification criteria are not met.

- Specific target organ toxicity - single exposure Based on available data, the classification criteria are not met.

- Specific target organ toxicity - repeated exposure
May cause damage to the central nervous system and the peripheral nervous system through prolonged or repeated exposure. Route of exposure: Oral.

- Aspiration hazard Based on available data, the classification criteria are not met.
11.2 Information on other hazards

Endocrine disrupting properties
None of the ingredients is listed.

*
SECTION 12: Ecological information

12.1 Toxicity
Aquatic toxicity: No further relevant information available.

12.2 Persistence and degradability No further relevant information available.

12.3 Bioaccumulative potential No further relevant information available.

12.4 Mobility in soil No further relevant information available.

12.5 Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.
12.6 Endocrine disrupting properties The product does not contain substances with endocrine disrupting properties.

12.7 Other adverse effects
Additional ecological information:
General notes:
Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Must not reach sewage water or drainage ditch undiluted or unneutralised.
Danger to drinking water if even extremely small quantities leak into the ground.

*
SECTION 13: Disposal considerations

13.1 Waste treatment methods

Recommendation Must not be disposed together with household garbage. Do not allow product to reach sewage system.

European waste catalogue	
HP5	Specific Target Organ Toxicity (STOT)/Aspiration Toxicity
HP6	Acute Toxicity
HP8	Corrosive

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Uncleaned packaging:
. Recommendation: Disposal must be made according to official regulations.
. Recommended cleansing agents: Water, if necessary together with cleansing agents.

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SECTION 14: Transport information

14.1 UN number or ID number	
ADR/RID/ADN, IMDG, IATA	UN1760
14.2 UN proper shipping name	
ADR/RID/ADN	UN1760 CORROSIVE LIQUID, N.O.S. (Lithium salt)
IMDG, IATA	CORROSIVE LIQUID, N.O.S. (Lithium salt)
14.3 Transport hazard class(es)	
ADR/RID/ADN, IMDG, IATA	

Class	8
Label	8
14.4 Packing group	
ADR/RID/ADN, IMDG, IATA	II
14.5 Environmental hazards:	Not applicable.
14.6 Special precautions for user	Warning: Corrosive substances.
Hazard identification number (Kemler code):	80
EMS Number:	F-A,S-B
Stowage Category	B
Stowage Code	SW2 Clear of living quarters.
14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
Transport/Additional information:	
ADR/RID/ADN	
Limited quantities (LQ)	1L
Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
Transport category	2
Tunnel restriction code	E
IMDG	
Limited quantities (LQ)	1L
Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
UN "Model Regulation":	UN 1760 CORROSIVE LIQUID, N.O.S. (LITHIUM SALT), 8, II

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SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Labelling according to Regulation (EC) No 1272/2008 The product is classified and labelled according to the CLP regulation.
Hazard pictograms

GHS05 GHS07 GHS08

Signal word Danger
Hazard-determining components of labelling:
lithium bis(trifluoromethylsulfonyl)imide
Hazard statements
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H373 May cause damage to the central nervous system and the peripheral nervous system through prolonged or repeated exposure. Route of exposure: Oral.
Precautionary statements
P260 Do not breathe dust/fume/gas/mist/vapours/spray.

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P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
Directive 2012/18/EU
Named dangerous substances - ANNEX I None of the ingredients is listed.
REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II
None of the ingredients is listed.

REGULATION (EU) 2019/1148

Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))
None of the ingredients is listed.

Annex II - REPORTABLE EXPLOSIVES PRECURSORS
None of the ingredients is listed.

Regulation (EC) No 273/2004 on drug precursors
None of the ingredients is listed.

Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors
None of the ingredients is listed.

15.2 Chemical safety assessment:
For this product, no chemical safety assessment has been performed.
A Chemical Safety Assessment has been carried out.

SECTION 16: Other information

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

For research and development use only.
Relevant phrases
H301 Toxic if swallowed.
H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H373 May cause damage to organs through prolonged or repeated exposure.
H412 Harmful to aquatic life with long lasting effects.
Department issuing SDS: Regulatory affairs department
Contact:
Email: hse@solvionic.com
Phone number: +33 (0)5.34.63.35.35
Date of previous version: 18.06.2023
Version number of previous version: 8
Abbreviations and acronyms:
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods (Código Marítimo Internacional de Mercancías Peligrosas).
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
ATE: Acute toxicity estimate values
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

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Annex: Exposure scenario

Short title of the exposure scenario
Sector of Use SU24 Scientific research and development
Product category PC21 Laboratory chemicals
Description of the activities / processes covered in the Exposure Scenario See section 1 of the annex to the Safety Data Sheet.
Conditions of use
Duration and frequency 5 workdays/week.
Physical parameters
Physical state Liquid
Concentration of the substance in the mixture The substance is main component.
Used amount per time or activity Smaller than 100 g per application.
Other operational conditions
Other operational conditions affecting environmental exposure No special measures required.
Other operational conditions affecting worker exposure
Avoid contact with eyes.
Avoid contact with the skin.
Other operational conditions affecting consumer exposure No special measures required.
Other operational conditions affecting consumer exposure during the use of the product Not applicable.
Risk management measures
Worker protection
Organisational protective measures No special measures required.
Technical protective measures Ensure that suitable extractors are available on processing machines
Personal protective measures
Do not inhale gases / fumes / aerosols.
Avoid contact with the skin.
Avoid contact with the eyes.
Tightly sealed goggles
Protective gloves
The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374.
Measures for consumer protection Ensure adequate labelling.
Environmental protection measures
Water Generally, prior to the introduction of wastewater into wastewater treatment plants a neutralisation is required.
Disposal measures Ensure that waste is collected and contained.
Disposal procedures Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Waste type Partially emptied and uncleaned packaging
Exposure estimation
Consumer Not relevant for this Exposure Scenario.
Guidance for downstream users No further relevant information available.