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

Printing date 23.12.2021 Version number 3 Revision: 23.12.2021

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

1.1 Product identifier

Trade name: LiFSI:PYR13 FSI 1:9 (mol.)

Article number: E260
Registration number Reach : 01-2120888409-36-0000

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
- Process category PROC 1 - PROC 5- PROC 8b - PROC 9 - PROC 15.
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
T: +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.

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.
Eye Dam. 1 H318 Causes serious eye damage.
Skin Sens. 1 H317 May cause an allergic skin reaction.
Repr. 2 H361 Suspected of damaging fertility or the unborn child. 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:
N-Propyl-N-methylpyrrolidinium bis(fluorosulfonyl)imide
lithium bis(fluorosulfonyl)imide

Hazard statements
H302 Harmful if swallowed.
H318 Causes serious eye damage.

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H317 May cause an allergic skin reaction.
H361 Suspected of damaging fertility or the unborn child. Route of exposure: Oral.

Precautionary statements
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
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.
P321 Specific treatment (see on this label).
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.

SECTION 3: Composition/information on ingredients

3.2 Chemical characterisation: Mixtures

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

- Dangerous components:		
CAS: 852620-97-4 EC number: 814-970-5	N-Propyl-N-methylpyrrolidinium bis(fluorosulfonyl)imide Acute Tox. 4, H302; Skin Sens. 1, H317; Aquatic Chronic 3, H412	>60–≤95%
CAS: 171611-11-3 EC number: 686-526-7	lithium bis(fluorosulfonyl)imide Repr. 2, H361; Eye Dam. 1, H318; Acute Tox. 4, H302; Skin Irrit. 2, H315	>5–≤10%

- 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:
Supply fresh air and to be sure call for a doctor.
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.

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 No further relevant information available.

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

SECTION 6: Accidental release measures

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

6.2 Environmental precautions: 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.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.

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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.

SECTION 7: Handling and storage

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

7.2 Conditions for safe storage, including any incompatibilities
. 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.

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

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
Additional information about design of technical facilities: No further data; see item 7.
- Ingredients with limit values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
. Additional information: The lists valid during the making were used as basis.

8.2 Exposure controls
- 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.
. Protection of hands:


Protective gloves

Neoprene gloves
To minimise the wetness in the glove due to perspiration changing of gloves during a shift is required.
Material of gloves Neoprene gloves
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 protection:


Tightly sealed goggles

. Body protection: Use protective suit.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties
- General Information
. Appearance:

Form:	Fluid
Color:	Colorless to light yellow
. Odor:	Not determined.
. Odor threshold:	Not determined.
- pH-value:	Not determined

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- Change in condition	
. Melting point/freezing point:	Undetermined.
. Initial boiling point and boiling range:	315 °C (CAS: 852620-97-4 N-Propyl-N-methylpyrrolidinium bis(fluorosulfonyl)imide)
- Flash point:	300 °C (CAS: 852620-97-4 N-Propyl-N-methylpyrrolidinium bis(fluorosulfonyl)imide)
- Flammability (solid, gas):	Not applicable.
. Decomposition temperature:	Not determined.
- Auto-ignition temperature:	Product is not selfigniting.
- Explosive properties:	Product does not present an explosion hazard.
- Explosion limits:	
. Lower:	Not determined.
. Upper:	Not determined.
- Vapour pressure:	Not determined.
- Density at 20 °C:	1,366 g/cm³
. Bulk density:	1.325 kg/m³
. Relative density	Not determined.
. Vapour density	Not determined.
. Evaporation rate	Not determined.
- Solubility in / Miscibility with	
. water:	Not miscible or difficult to mix.
- Partition coefficient: n-octanol/water:	Not determined.
- Viscosity:	
. Dynamic:	Not determined.
. Kinematic:	Not determined.
- Solvent content:	
. VOC (EC)	0,00 %
9.2 Other information	No further relevant information available.

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.

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 base.

10.6 Hazardous decomposition products: No dangerous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects
Acute toxicity
Harmful if swallowed.

LD/LC50 values relevant for classification:		
ATE (Acute Toxicity Estimates)		
Oral	LD50	500 mg/kg

CAS: 852620-97-4 N-Propyl-N-methylpyrrolidinium bis(fluorosulfonyl)imide		
Oral	LD50	500 mg/kg (rat) (Acute Oral toxicity) In accordance with OECD Guideline 423, the LD50 cut-off of the test item may be considered as 500mg/ kg bw/day by oral route in the rat
CAS: 171611-11-3 lithium bis(fluorosulfonyl)imide		
Oral	LD50	500 mg/kg (ATE)

- Primary irritant effect:
. Skin corrosion/irritation Based on available data, the classification criteria are not met.
. Serious eye damage/irritation
Causes serious eye damage.

- Respiratory or skin sensitisation
May cause an allergic skin reaction.
Additional toxicological information:

- CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
. Germ cell mutagenicity Based on available data, the classification criteria are not met.
. Carcinogenicity Based on available data, the classification criteria are not met.

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. Reproductive toxicity
Suspected of damaging fertility or the unborn child. Route of exposure: Oral.

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

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

- Aspiration hazard Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1 Toxicity

CAS: 852620-97-4 N-Propyl-N-methylpyrrolidinium bis(fluorosulfonyl)imide

Dermal	Skin irritation	95,2 % /tissue via (Skin irritation in vitro) OECD Guideline 439 (In Vitro Skin Irritation: Reconstructed Human Epidermis Test Method).
	Skin corrosion	88,72 % /tissue (In Vitro Skin Corrosion RHE) % tissue viability After 1hour : 131.98 % tissue viability After 3 minutes : 88.72 Product not corrosif.
Irritation of eyes	Eye irritation	score (Isolated Chicken Eye Test) cornea opacity score : 0 fluorescein retention score: 0.5 percent corneal swelling: 6
Sensitisation	Skin sensitisation	% at mM (In Chemico Skin Sensitisation: DPRA) lysine depletion: 2.63% at 100 mM. cysteine depletion: 94.68 % at 100 mM overall average : 48.66% These results are reflecting a high reactivity and therefore a positive prediction of Direct Peptide Reactivity Assay DPRA.
	Skin sensitisation	813,77 µM (In Vitro Skin Sensitisation: KeratinoSens™) The result of the test KeratinoSens™ show that the product may be a potential skin sensitizer.
	Genetic toxicity in vitro	/5000, 1500, 50 (Bacterial Reverse Mutation Assay) The product do not induce any mutagenic change in Salmonella typhimurium TA 1535, 1537, TA 98, TA 100 strains and Escherichia coli WP2(uvr A) (pkm101) strain without or with metabolic activation, according to the OECD guideline 471.

Aquatic toxicity:

CAS: 852620-97-4 N-Propyl-N-methylpyrrolidinium bis(fluorosulfonyl)imide

EC50 freshwater algae and cyanobacteria (static)	100 mg/L (Freshwater Alga and Cyanobacteria test) The EC50 and EC10 above 100 mg/L on the growth of Pseudokirchneriella subcapitata over a period of 72 hours. NOEC (growth rate): 100 mg/L LOEC (growth rate): > 100 mg/L NOEC (yield): 100 mg/L LOEC (yield): > 100 mg/L 72h-ErC10: > 100 mg/L 72h-ErC20: > 100 mg/L 72h-ErC50: > 100 mg/L 72h-EyC10: > 100 mg/L 72h-EyC20: > 100 mg/L 72h-EyC50: > 100 mg/L
48h-EC50 (static)	95,04 mg/L (daphnia) (EC50 (daphnia)) Short-term toxicity to aquatic invertebrates: 48h-EC50 = 95.04 mg / L (Daphnia magna). The substance is not considered acutely toxic to aquatic species according to the CLP criteria.

12.2 Persistence and degradability

CAS: 852620-97-4 N-Propyl-N-methylpyrrolidinium bis(fluorosulfonyl)imide

Biodegradation	0 % degradation /Not biodegrad (Biodegradation in water) the test of the product was found to be not readily biodegradable.

12.3 Bioaccumulative potential No further relevant information available.

12.4 Mobility in soil No further relevant information available.
Additional ecological information:
General notes:
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Must not reach sewage water or drainage ditch undiluted or unneutralised.
Danger to drinking water if even small quantities leak into the ground.

12.5 Results of PBT and vPvB assessment
PBT: Not applicable.

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vPvB: Not applicable.

12.6 Other adverse effects No further relevant information available.

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	
HP6	Acute Toxicity
HP10	Toxic for reproduction
HP13	Sensitising
HP14	Ecotoxic

Uncleaned packaging:
. Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information

14.1 UN-Number **ADR/RID/ADN, ADN, IMDG, IATA**	not regulated
14.2 UN proper shipping name **ADR/RID/ADN, ADN, IMDG, IATA**	not regulated
14.3 Transport hazard class(es) **ADR/RID/ADN, ADN, IMDG, IATA** **Class**	not regulated
14.4 Packing group **ADR/RID/ADN, IMDG, IATA**	not regulated
14.5 Environmental hazards:	Not applicable.
14.6 Special precautions for user	Not applicable.
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
UN "Model Regulation":	not regulated

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:
N-Propyl-N-methylpyrrolidinium bis(fluorosulfonyl)imide
lithium bis(fluorosulfonyl)imide
Hazard statements
H302 Harmful if swallowed.
H318 Causes serious eye damage.
H317 May cause an allergic skin reaction.
H361 Suspected of damaging fertility or the unborn child. Route of exposure: Oral.
Precautionary statements
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
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.
P321 Specific treatment (see on this label).
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.

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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.

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

H302 Harmful if swallowed.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H361 Suspected of damaging fertility or the unborn child.
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

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
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
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
Repr. 2: Reproductive toxicity – Category 2
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3