

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

Printing date 16.12.2021

Version number 2

Revision: 16.12.2021

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

1.1 Product identifier

Trade name: [LiFSI : PYR14FSI 2:3 (mol.)] : PolyDDAFSI 42:58 (wt.), 50wt% in acetonitrile

Article number: EM028

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

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 professionals 24/7), +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: Giftinformationscentralen Box 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 Università 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

Flam. Liq. 2 H225 Highly flammable liquid and vapour.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Dam. 1 H318 Causes serious eye damage.

Repr. 2 H361 Suspected of damaging fertility or the unborn child. Route of exposure: Oral.

STOT SE 3 H335 May cause respiratory irritation.

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



GHS02

GHS05

GHS07

GHS08

Signal word Danger

Hazard-determining components of labelling:

lithium bis(fluorosulfonyl)imide

Poly(diallyldimethylammonium) bis(fluorosulfonyl)imide

Hazard statements

H225 Highly flammable liquid and vapour.

H315 Causes skin irritation.

H318 Causes serious eye damage.

(Contd. on page 2)

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(Contd. of page 1)

H361 Suspected of damaging fertility or the unborn child. Route of exposure: Oral.
H335 May cause respiratory irritation.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
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.

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: 75-05-8 EINECS: 200-835-2 Index number: 608-001-00-3	acetonitrile; cyanomethane Flam. Liq. 2, H225; Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	>40–≤60%
CAS: 1883729-87-0 EC number: 954-493-0	Poly(diallyldimethylammonium) bis(fluorosulfonyl)imide Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	>25–≤40%
CAS: 1057745-51-3	1-Butyl-1-methylpyrrolidinium bis(fluorosulfonyl)imide Skin Irrit. 2, H315; Eye Irrit. 2, H319	>10–≤25%
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.
- . **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.

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:** CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- . **For safety reasons unsuitable extinguishing agents:** Water with full jet

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.

(Contd. on page 3)

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(Contd. of page 2)

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.

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 ignition sources away - Do not smoke.

Protect against electrostatic charges.

Keep respiratory protective device available.

7.2 Conditions for safe storage, including any incompatibilities**. Storage:****Requirements to be met by storerooms and receptacles:** Store in a cool location.**Information about storage in one common storage facility:** Not required.**Further information about storage conditions:**

Keep container tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

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:****CAS: 75-05-8 acetonitrile**

IOELV (EU)	Long-term value: 70 mg/m ³ , 40 ppm Skin
LEP (Spain)	Long-term value: 68 mg/m ³ , 40 ppm via dérmica, VLI
WEL (Great Britain)	Short-term value: 102 mg/m ³ , 60 ppm Long-term value: 68 mg/m ³ , 40 ppm
OEL (Ireland)	Long-term value: 70 mg/m ³ , 40 ppm Sk, IOELV
AG (Norway)	Long-term value: 50 mg/m ³ , 30 ppm H E
WGW (Netherland)	Long-term value: 34 mg/m ³ , 20 ppm
OEL (Sweden)	Short-term value: 100 mg/m ³ , 60 ppm Long-term value: 50 mg/m ³ , 30 ppm H, V
HTP (Finland)	Short-term value: 68 mg/m ³ , 40 ppm Long-term value: 34 mg/m ³ , 20 ppm iho

. 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 skin.

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

(Contd. on page 4)

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(Contd. of page 3)

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:	Viscous liquid
. Color:	Colorless to yellow
. Odor:	Not determined.
. Odor threshold:	Not determined.
. pH-value:	Not determined

- Change in condition

. Melting point/freezing point:	Undetermined.
. Initial boiling point and boiling range:	81 °C
- Flash point:	5 °C
- Flammability (solid, gas):	Not applicable.
. Ignition temperature:	525 °C
. Decomposition temperature:	Not determined.
- Auto-ignition temperature:	Product is not selfigniting.
- Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
- Explosion limits:	
. Lower:	4,4 Vol %
. Upper:	16 Vol %
- Vapour pressure at 20 °C:	97 hPa

- Density:	Not determined.
. 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 Based on available data, the classification criteria are not met.

(Contd. on page 5)

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(Contd. of page 4)

LD/LC50 values relevant for classification:**ATE (Acute Toxicity Estimates)**

Oral	LD50	8532 mg/kg
Dermal	LD50	2500 mg/kg (rabbit)
Inhalative	LC50/4 h	22 mg/l

CAS: 75-05-8 acetonitrile

Oral	LD50	2730 mg/kg (rat)
Dermal	LD50	1250 mg/kg (rabbit)
Inhalative	LC50/4 h	11 mg/l (ATE)

CAS: 171611-11-3 lithium bis(fluorosulfonyl)imide

Oral	LD50	500 mg/kg (ATE)
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- Primary irritant effect:**. Skin corrosion/irritation**

Causes skin irritation.

. Serious eye damage/irritation

Causes serious eye damage.

- Respiratory or skin sensitisation Based on available data, the classification criteria are not met.**Additional toxicological information:****- CMR effects (carcinogenicity, 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.**. Reproductive toxicity**

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

- Specific target organ toxicity - single exposure

May cause respiratory irritation.

- 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****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.**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.**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**

HP3	Flammable
HP4	Irritant - skin irritation and eye damage
HP5	Specific Target Organ Toxicity (STOT)/Aspiration Toxicity
HP6	Acute Toxicity
HP10	Toxic for reproduction

(Contd. on page 6)

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(Contd. of page 5)

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

SECTION 14: Transport information

14.1 UN-Number

ADR/RID/ADN, IMDG, IATA

UN1648

14.2 UN proper shipping name

ADR/RID/ADN

IMDG, IATA

UN1648 ACETONITRILE solution

ACETONITRILE solution

14.3 Transport hazard class(es)

ADR/RID/ADN, IMDG, IATA



Class

3 Flammable liquids.

Label

3

14.4 Packing group

ADR/RID/ADN, IMDG, IATA

II

14.5 Environmental hazards:

Not applicable.

14.6 Special precautions for user

Hazard identification number (Kemler code):

Warning: Flammable liquids.

33

EMS Number:

F-E,S-D

Stowage Category

B

Stowage Code

SW2 Clear of living quarters.

14.7 Transport in bulk according to Annex II of Marpol and the**IBC Code**

Not applicable.

Transport/Additional information:

ADR/RID/ADN

Limited quantities (LQ)

Excepted quantities (EQ)

1L

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

Transport category

2

Tunnel restriction code

D/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 1648 ACETONITRILE SOLUTION, 3, II

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



GHS02



GHS05



GHS07



GHS08

Signal word Danger

Hazard-determining components of labelling:

lithium bis(fluorosulfonyl)imide

Poly(diallyldimethylammonium) bis(fluorosulfonyl)imide

Hazard statements

H225 Highly flammable liquid and vapour.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H361 Suspected of damaging fertility or the unborn child. Route of exposure: Oral.

H335 May cause respiratory irritation.

(Contd. on page 7)

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(Contd. of page 6)

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 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.

Seveso category P5c FLAMMABLE LIQUIDS

Qualifying quantity (tonnes) for the application of lower-tier requirements 5000 t

Qualifying quantity (tonnes) for the application of upper-tier requirements 50000 t

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.

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

H225 Highly flammable liquid and vapour.
 H302 Harmful if swallowed.
 H312 Harmful in contact with skin.
 H315 Causes skin irritation.
 H318 Causes serious eye damage.
 H319 Causes serious eye irritation.
 H332 Harmful if inhaled.
 H335 May cause respiratory irritation.
 H361 Suspected of damaging fertility or the unborn child.

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 européen sur le transport 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
 Flam. Liq. 2: Flammable liquids – Category 2
 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
 Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
 Repr. 2: Reproductive toxicity – Category 2
 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3