

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

Printing date 16.12.2021

Version number 3

Revision: 16.12.2021

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

**1.1 Product identifier**

**Trade name:** [LiTFSI : PYR14FSI 1:9 (mol.)] : PolyDDAFSI 42:58 (wt.),50wt% in acetone

**Article number:** EM009

**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 vergiftiging: 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 vergiftiging, +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 Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.

**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

GHS07

**Signal word** Danger

**Hazard-determining components of labelling:**

acetone

Poly(diallyldimethylammonium) bis(fluorosulfonyl)imide

**Hazard statements**

H225 Highly flammable liquid and vapour.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

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H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.

**Precautionary statements**

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P241 Use explosion-proof [electrical/ventilating/lighting] equipment.
- 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.
- 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: 67-64-1 EINECS: 200-662-2 Index number: 606-001-00-8	acetone; propan-2-one; propanone; 2-Oxopropane; 2-Propanone; beta-Ketopropane; Dimethyl ketone; Pyroacetic ether Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336	>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: 90076-65-6 ELINCS: 415-300-0 Index number: 616-124-00-9	lithium bis(trifluoromethylsulfonyl)imide; 1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl]methanesulfonamide lithium salt Acute Tox. 3, H301; Acute Tox. 3, H311; STOT RE 2, H373; Skin Corr. 1B, H314; Aquatic Chronic 3, H412	≤2,5%

**- 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. If symptoms persist, 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:** CO<sub>2</sub>, 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).
- Dispose contaminated material as waste according to item 13.

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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.

Prevent formation of aerosols.

**. Information about fire - and explosion protection:**

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

**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: 67-64-1 acetone**

IOELV (EU)	Long-term value: 1210 mg/m <sup>3</sup> , 500 ppm
LEP (Spain)	Long-term value: 1210 mg/m <sup>3</sup> , 500 ppm VLB, VLI
WEL (Great Britain)	Short-term value: 3620 mg/m <sup>3</sup> , 1500 ppm Long-term value: 1210 mg/m <sup>3</sup> , 500 ppm
OEL (Ireland)	Long-term value: 1210 mg/m <sup>3</sup> , 500 ppm IOELV
AG (Norway)	Long-term value: 295 mg/m <sup>3</sup> , 125 ppm E
GWG (Netherland)	Short-term value: 2420 mg/m <sup>3</sup> , 1000 ppm Long-term value: 1210 mg/m <sup>3</sup> , 500 ppm
OEL (Sweden)	Short-term value: 1200 mg/m <sup>3</sup> , 500 ppm Long-term value: 600 mg/m <sup>3</sup> , 250 ppm V
HTP (Finland)	Short-term value: 1500 mg/m <sup>3</sup> , 630 ppm Long-term value: 1200 mg/m <sup>3</sup> , 500 ppm

**CAS: 90076-65-6 lithium bis(trifluoromethylsulfonyl)imide**

OEL (Sweden)	Short-term value: 0,02 mg/m <sup>3</sup> som Li; inhalerbar fraktion
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**Ingredients with biological limit values:****CAS: 67-64-1 acetone**

VLB (Spain)	50 mg/l Muestra: orina Momento de Muestero: Final de la jornada laboral Indicador Biológico: Acetona
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**. 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.

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.

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**. 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:**

<b>. Form:</b>	Viscous liquid
<b>. Color:</b>	Colorless to yellow
<b>. Odor:</b>	Not determined.
<b>. Odor threshold:</b>	Not determined.
<b>- pH-value:</b>	Not determined

**- Change in condition**

<b>. Melting point/freezing point:</b>	Undetermined.
<b>. Initial boiling point and boiling range:</b>	55,8–56,6 °C
<b>- Flash point:</b>	<10 °C
<b>- Flammability (solid, gas):</b>	Not applicable.
<b>. Ignition temperature:</b>	465 °C
<b>. Decomposition temperature:</b>	Not determined.
<b>- Auto-ignition temperature:</b>	Product is not selfigniting.
<b>- Explosive properties:</b>	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
<b>- Explosion limits:</b>	
<b>. Lower:</b>	2,6 Vol %
<b>. Upper:</b>	13 Vol %
<b>- Vapour pressure at 20 °C:</b>	233 hPa

<b>- Density:</b>	Not determined.
<b>. Relative density</b>	Not determined.
<b>. Vapour density</b>	Not determined.
<b>. Evaporation rate</b>	Not determined.

**- Solubility in / Miscibility with**

<b>. water:</b>	Not miscible or difficult to mix.
<b>- Partition coefficient: n-octanol/water:</b>	Not determined.
<b>- Viscosity:</b>	
<b>. Dynamic:</b>	Not determined.
<b>. Kinematic:</b>	Not determined.
<b>- Solvent content:</b>	
<b>. Organic solvents:</b>	50,0 %
<b>. VOC (EC)</b>	50,00 %

**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.

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**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.

#### LD/LC50 values relevant for classification:

##### ATE (Acute Toxicity Estimates)

Oral	LD50	5291 mg/kg
Dermal	LD50	15873 mg/kg

##### CAS: 67-64-1 acetone

Oral	LD50	5800 mg/kg (rat)
Dermal	LD50	20000 mg/kg (rabbit)

##### CAS: 90076-65-6 lithium bis(trifluoromethylsulfonyl)imide

Oral	LD50	100 mg/kg (ATE)
Dermal	LD50	300 mg/kg (ATE)

- **Primary irritant effect:**

. **Skin corrosion/irritation**

Causes skin irritation.

. **Serious eye damage/irritation**

Causes serious eye irritation.

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

- **Specific target organ toxicity - single exposure**

May cause respiratory irritation. May cause drowsiness or dizziness.

- **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.

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

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

## SECTION 14: Transport information

**14.1 UN-Number**

ADR/RID/ADN, IMDG, IATA

UN1993

**14.2 UN proper shipping name**

ADR/RID/ADN

IMDG, IATA

UN1993 FLAMMABLE LIQUID, N.O.S. (ACETONE)

FLAMMABLE LIQUID, N.O.S. (ACETONE)

**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-E

Stowage Category

B

**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)

IL

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

D/E

IMDG

Limited quantities (LQ)

IL

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 1993 FLAMMABLE LIQUID, N.O.S. (ACETONE), 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



GHS07

Signal word Danger

**Hazard-determining components of labelling:**

acetone

Poly(diallyldimethylammonium) bis(fluorosulfonyl)imide

**Hazard statements**

H225 Highly flammable liquid and vapour.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.

**Precautionary statements**

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

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P241 Use explosion-proof [electrical/ventilating/lighting] equipment.

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.

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.

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.

H335 May cause respiratory irritation.

H336 May cause drowsiness or dizziness.

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

**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. 3: Acute toxicity – Category 3

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

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

UE