

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

Printing date 08.02.2022

Version number 20

Revision: 08.02.2022

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

1.1 Product identifier

Trade name: N-Propyl-N-methylpyrrolidinium bis(fluorosulfonyl)imide 99,5%

Article number: PYR1333B

CAS Number:

852620-97-4

EC number:

814-970-5

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

SU16 Manufacture of computer, electronic and optical products, electrical equipment

- **Product category**

PC21 Laboratory chemicals

PC42 Electrolytes for batteries

- **Process category**

PROC15 Use as laboratory reagent

PROC 1 - PROC 5- PROC 8b - PROC 9 - PROC 15.

Application of the substance / the mixture

Ionic liquid for professional and industrial use as an electrolyte for batteries. This product is also intended for use in scientific 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/ Belgium: Centre Anti-Poisons/Antigifocentrum 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.

- Norge/ Norway: Giftinformasjonen: +47 22 59 13 00.

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 Sens. 1 H317 May cause an allergic skin reaction.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

2.2 Label elements

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

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.02.2022

Version number 20

Revision: 08.02.2022

Trade name: N-Propyl-N-methylpyrrolidinium bis(fluorosulfonyl)imide 99,5%

(Contd. of page 1)

Hazard pictograms

GHS07

Signal word Warning**Hazard statements**

H302 Harmful if swallowed.

H317 May cause an allergic skin reaction.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P264 Wash contaminated body parts thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P273 Avoid release to the environment.

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

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

3.1 Chemical characterisation: Substances**- CAS No. / Description**

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

- Identification number(s)

EC number: 814-970-5

Molecular formula: C8 H18 F2 O4 S2 N2**Molar mass:** 308,37 g/mol

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.**. 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 Use individual protective gear.**6.2 Environmental precautions:**

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.02.2022

Version number 20

Revision: 08.02.2022

Trade name: N-Propyl-N-methylpyrrolidinium bis(fluorosulfonyl)imide 99,5%

(Contd. of page 2)

6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

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** No special precautions are necessary if used correctly.**Information about fire - and explosion protection:** No special measures required.**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:** None.**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:** Not required.**Additional information:** The lists valid during the making were used as basis.**8.2 Exposure controls****- Personal protective equipment:****. General protective and hygienic measures:**

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

. Respiratory protection: Not required.**. Protection of hands:**

Neoprene gloves

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



Protective gloves

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

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.

Chloroprene rubber (Neopren)

Butyl rubber, BR

Nitrile rubber, NBR

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: Goggles recommended during refilling**. 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
. Odor:	Not determined.
. Odor threshold:	Not determined.
- pH-value:	5,5 (10%)

- Change in condition

. Melting point/freezing point:	-9 °C (J. Phys. Chem. B 2008)
. Initial boiling point and boiling range:	315 °C (OECD Guideline 103)
. Crystallisation temperature / range:	- 30 °C
- Flash point:	300 °C (Pensky–Martens closed-cup)
- Flammability (solid, gas):	Not applicable.
. Decomposition temperature:	350 °C (OECD Guideline 103)

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.02.2022

Version number 20

Revision: 08.02.2022

Trade name: N-Propyl-N-methylpyrrolidinium bis(fluorosulfonyl)imide 99,5%

(Contd. of page 3)

- Auto-ignition temperature:	Not determined.
- Explosive properties:	Product does not present an explosion hazard.
- Explosion limits:	
. Lower:	Not determined.
. Upper:	Not determined.
- Vapour pressure at 20 °C:	0 hPa (OECD Guideline 104)
- Density at 20 °C:	1,343 g/cm ³
. Relative density at 20 °C	1,3433 g/cm ³ (EU Method A.3)
. Vapour density	Not determined.
. Evaporation rate	Not determined.
- Solubility in / Miscibility with	
. water at 20 °C:	18,9 g/l (OECD Guideline 105)
- Partition coefficient: n-octanol/water:	1,09968–2,20003 (OECD Guideline 117 (HPLC))
- Viscosity:	
. Dynamic:	Not determined.
. Kinematic:	Not determined.
Viscosity at 25 °C (77 °F)	52,7 mPas
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:

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		

- Primary irritant effect:

. **Skin corrosion/irritation** Based on available data, the classification criteria are not met.

. **Serious eye damage/irritation** Based on available data, the classification criteria are not met.

- Respiratory or skin sensitisation

May cause an allergic skin reaction.

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** 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

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.

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.02.2022

Version number 20

Revision: 08.02.2022

Trade name: N-Propyl-N-methylpyrrolidinium bis(fluorosulfonyl)imide 99,5%

(Contd. of page 4)

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%
	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:

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

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.**Ecotoxicological effects:****Remark:** Harmful to fish**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.

Harmful to aquatic organisms

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	
HP6	Acute Toxicity
HP13	Sensitising
HP14	Ecotoxic

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.02.2022

Version number 20

Revision: 08.02.2022

Trade name: N-Propyl-N-methylpyrrolidinium bis(fluorosulfonyl)imide 99,5%

(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, 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 substance is classified and labelled according to the CLP regulation.

Hazard pictograms

GHS07

Signal word Warning**Hazard statements**

H302 Harmful if swallowed.

H317 May cause an allergic skin reaction.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P264 Wash contaminated body parts thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P273 Avoid release to the environment.

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Directive 2012/18/EU**Named dangerous substances - ANNEX I** Substance is not 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**

Substance is not listed.

REGULATION (EU) 2019/1148**Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**

Substance is not listed.

Annex II - REPORTABLE EXPLOSIVES PRECURSORS Substance is not listed.**Regulation (EC) No 273/2004 on drug precursors** Substance is not listed.**Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**

Substance is not 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.

(Contd. on page 7)

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

Printing date 08.02.2022

Version number 20

Revision: 08.02.2022

Trade name: N-Propyl-N-methylpyrrolidinium bis(fluorosulfonyl)imide 99,5%

(Contd. of page 6)

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.

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

CAS: Chemical Abstracts Service (division of the American Chemical Society)

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 Sens. 1: Skin sensitisation – Category 1

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

UE