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

1.1 Product identifier
Trade name: 1-Butyl-1-methylpyrrolidinium bis(fluorosulfonyl)imide 99,5%
Article number: PYR0433B
CAS Number: 1057745-51-3

1.2 Relevant identified uses of the substance or mixture and uses advised against
No other important information available.

1.3 Details of the supplier of the safety data sheet
Manufacturer/Supplier:
Solvionic SA
195 route d'Espagne
31036 TOULOUSE
FRANCE
Phone number: +33 (0)5.34.63.35.35
Further information obtainable from: HSE Department

1.4 Emergency telephone number:
ORFILA (INRS): +33 (0)1.45.42.59.59
CCHST: 1-800-668-4284 (Canada & U.S.A)

SECTION 2: Hazards identification

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

![GHS07]

Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.

2.2 Label elements
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
H315 Causes skin irritation.
H319 Causes serious eye irritation.

Precautionary statements
P264 Wash thoroughly after handling.
P280 Wear protective gloves / eye protection / face protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321 Specific treatment (see on this label).
P332+P313 If skin irritation occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.

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
  1057745-51-3 1-Butyl-1-methylpyrrolidinium bis(fluorosulfonyl)imide
- Molecular formula: C9 H20 N2 S2 O4 F2

(Contd. on page 2)
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: 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: No special measures required.

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: In case of heat treatment, handle this product under an inert atmosphere.

- 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: Keep this product cool and dry.
- Information about storage in one common storage facility: Not required.

Further information about storage conditions:

- Keep container tightly sealed.
- Protect from heat and direct sunlight.

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

SECTION 8: Exposure controls/personal protection

Additional information about design of technical facilities: No further data; see item 7.

8.1 Control parameters

- 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:
- 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.

(Contd. on page 3)
Trade name: 1-Butyl-1-methylpyrrolidinium bis(fluorosulfonyl)imide 99.5%

48.1.23

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

![Protective gloves]

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

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.

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]


SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties
- General Information
  . Appearance:
    - Form: Fluid
    - Colour: Colourless
    - Odour: Not determined.
    - Odour threshold: Not determined.
  . pH-value:
    - at 20°C: Not determined.
    - at 25°C: 5,25 mS/cm
  . Conductivity
    - at 20°C: 5,19 mS/cm
    - at 25°C: 6,19 mS/cm
  . Change in condition
    - Melting point/freezing point: -19 °C
    - Initial boiling point and boiling range: Undetermined.
    - Flash point: Not applicable.
    - Flammability (solid, gas): Not applicable.
    - Decomposition temperature: Not determined.
    - Auto-ignition temperature: Not determined.
    - 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: 1,304 g/cm³
  . Bulk density: 1,310 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 at 20 °C: 64,1 mPas
    - Kinematic: Not determined.

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: Thermal decomposition in contact with the humidity of the air.

10.3 Possibility of hazardous reactions In contact with water and heat, decomposition and formation of Hydrogen Fluoride (HF).

10.4 Conditions to avoid In case of heat treatment, avoid handling this product in air.

10.5 Incompatible materials: Strong oxidizer and strong base.

10.6 Hazardous decomposition products: Hydrogen fluoride

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity Based on available data, the classification criteria are not met.

- 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.

- 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

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: Not hazardous for water.

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

HP 4 Irritant - skin irritation and eye damage

Uncleaned packaging:

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

(Contd. on page 5)
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

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

REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

15.2 Chemical safety assessment:
For this product, no chemical safety assessment has been performed.
A Chemical Safety Assessment has not 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.

Department issuing SDS: Environmental Protection Service
Contact:
Mail: hsse@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
CAS: Chemical Abstracts Service (division of the American Chemical Society)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Skin Irrit. 2: Skin corrosion/irritation - Category 2
Eye Irrit. 2: Serious eye damage/eye irritation - Category 2
* Data compared to the previous version altered.