

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

Printing date 26.04.2022

Version number 5

Revision: 26.04.2022

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier****Trade name:** Lithium hexafluorophosphate 99,99%**Article number:** M0304A**CAS Number:**

21324-40-3

EC number:

244-334-7

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

☎ : +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.

- Norge/ Norway: Giftinformasjon: +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. 3 H301 Toxic if swallowed.

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.

STOT RE 1 H372 Causes damage to the bones and the teeth through prolonged or repeated exposure.

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**

GHS05



GHS06



GHS08

Signal word Danger**Hazard statements**

H301 Toxic if swallowed.

H314 Causes severe skin burns and eye damage.

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H372 Causes damage to the bones and the teeth through prolonged or repeated exposure.

Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.
 P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
 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

3.1 Chemical characterisation: Substances

- CAS No. / Description

CAS: 21324-40-3 Lithium hexafluorophosphate

- Identification number(s)

EC number: 244-334-7

Molecular formula: F₆ P Li

Molar mass: 151,9 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.

In case of irregular breathing or respiratory arrest provide artificial respiration.

. **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:**

Do not induce vomiting; call for medical help immediately.

Call for a doctor immediately.

Drink plenty of water and provide fresh air. 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:

Use neutralising agent.

Dispose contaminated material as waste according to item 13.

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.

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See Section 13 for disposal information.

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SECTION 7: Handling and storage

7.1 Precautions for safe handling Thorough dedusting.

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: Keep container tightly sealed.

Maximum storage temperature: Store at room temperature, not exceeding 35°C.

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: 21324-40-3 Lithium hexafluorophosphate

OEL (Sweden)	Short-term value: 0,02 mg/m ³ som Li; inhalerbar fraktion
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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.

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

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374.

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.

Butyl rubber, BR

Fluorocarbon rubber (Viton)

Nitrile rubber, NBR

Chloroprene rubber (Neopren)

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:

Crystalline powder

Color:

White

Odor:

Not determined.

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. Odor threshold:	Not determined.
- pH-value:	2,94
- Change in condition	
. Melting point/freezing point:	Undetermined.
. Initial boiling point and boiling range:	Undetermined.
- Flash point:	Not applicable.
- Flammability (solid, gas):	Product is not flammable.
. Decomposition temperature:	175 °C
- 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 applicable.
- Density at 20 °C:	1,5 g/cm ³
. Relative density	Not determined.
. Vapour density	Not applicable.
. Evaporation rate	Not applicable.
- Solubility in / Miscibility with	
. water:	Soluble.
- Partition coefficient: n-octanol/water:	Not determined.
- Viscosity:	
. Dynamic:	Not applicable.
. Kinematic:	Not applicable.
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 acid and base.

10.6 Hazardous decomposition products: No dangerous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Toxic if swallowed.

LD/LC50 values relevant for classification:

Oral	LD50	200 mg/kg (rat)
		300 mg/kg (rabbit)
Dermal	LD50	mg/kg (rat)
		mg/kg (rabbit)

- Primary irritant effect:

. Skin corrosion/irritation

Causes severe skin burns and eye damage.

. 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 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

Causes damage to the bones and the teeth through prolonged or repeated exposure.

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- **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) (Assessment by list): 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

HP5	Specific Target Organ Toxicity (STOT)/Aspiration Toxicity
HP6	Acute Toxicity
HP8	Corrosive

Uncleaned packaging:

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

. **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

14.1 UN-Number

ADR/RID/ADN, IMDG, IATA

UN2923

14.2 UN proper shipping name

ADR/RID/ADN

UN2923 CORROSIVE SOLID, TOXIC, N.O.S. (LITHIUM SALT)

IMDG, IATA

CORROSIVE SOLID, TOXIC, N.O.S. (LITHIUM SALT)

14.3 Transport hazard class(es)

ADR/RID/ADN



Class
Label
IMDG

8
8+6.1



Class
Label

8
8/6.1

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IATA

Class 8
Label 8 (6.1)

14.4 Packing group
 ADR/RID/ADN, IMDG, IATA II

14.5 Environmental hazards: Not applicable.

14.6 Special precautions for user Warning: Corrosive substances.
Hazard identification number (Kemler code): 86
EMS Number: F-A,S-B
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) 1 kg
Excepted quantities (EQ) Code: E2

Maximum net quantity per inner packaging: 30 g
 Maximum net quantity per outer packaging: 500 g

Transport category 2
Tunnel restriction code E

IMDG

Limited quantities (LQ) 1 kg
Excepted quantities (EQ) Code: E2

Maximum net quantity per inner packaging: 30 g
 Maximum net quantity per outer packaging: 500 g

UN "Model Regulation": UN 2923 CORROSIVE SOLID, TOXIC, N.O.S. (LITHIUM SALT), 8 (6.1), 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 substance is classified and labelled according to the CLP regulation.

Hazard pictograms

GHS05

GHS06

GHS08

Signal word Danger**Hazard statements**

H301 Toxic if swallowed.

H314 Causes severe skin burns and eye damage.

H372 Causes damage to the bones and the teeth through prolonged or repeated exposure.

Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

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** Substance is not listed.**Seveso category** H2 ACUTE TOXIC**Qualifying quantity (tonnes) for the application of lower-tier requirements** 50 t**Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t**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.

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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.

A Chemical Safety Assessment has 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: 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 (Código Marítimo Internacional de Mercancías Peligrosas).

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. 3: Acute toxicity – Category 3

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

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1

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Annex: Exposure scenario

Short title of the exposure scenario

Sector of Use SU24 Scientific research and development

Product category PC21 Laboratory chemicals

Description of the activities / processes covered in the Exposure Scenario See section 1 of the annex to the Safety Data Sheet.

Conditions of use

Duration and frequency 5 workdays/week.

Physical parameters

Physical state Solid

Concentration of the substance in the mixture Raw material.

Used amount per time or activity Smaller than 100 g per application.

Other operational conditions

Other operational conditions affecting environmental exposure No special measures required.

Other operational conditions affecting worker exposure

Avoid contact with eyes.

Avoid contact with the skin.

Other operational conditions affecting consumer exposure No special measures required.

Other operational conditions affecting consumer exposure during the use of the product Not applicable.

Risk management measures

Worker protection

Organisational protective measures No special measures required.

Technical protective measures Ensure that suitable extractors are available on processing machines

Personal protective measures

Do not inhale dust / smoke / mist.

Avoid contact with the skin.

Avoid contact with the eyes.

Tightly sealed goggles

Protective gloves

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374.

Measures for consumer protection Ensure adequate labelling.

Environmental protection measures

Water Generally, prior to the introduction of wastewater into wastewater treatment plants a neutralisation is required.

Disposal measures Ensure that waste is collected and contained.

Disposal procedures Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Waste type Partially emptied and uncleaned packaging

Exposure estimation

Consumer Not relevant for this Exposure Scenario.

Guidance for downstream users No further relevant information available.