



SAFETY DATA SHEET

Issuing Date: 10/07/2024

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

1.1 Product identifiers

Product name: Lithium phosphorus sulfur chloride (LPSCl) powder

SKU Number: EB24005

CAS-No.: Not Available

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Laboratory chemicals, Synthesis of substances

1.3 Details of the supplier of the safety data sheet

Accurate Atom Inc.

1425 W. Lincoln HWY

DeKalb, Illinois, 60115

www.accurateatom.com

Tech@accurateatom.com

1.4 Emergency telephone number

Accurate Atom Emergency Telephone: (630) 659-5999

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable solids (Category 1), H228

Substances and mixtures which in contact with water emit flammable gases (Category 1), H260

Acute toxicity, Oral (Category 3), H301 Acute toxicity,

Inhalation (Category 4), H332 Skin corrosion/irritation

(Category 1B), H314

Serious eye damage/eye irritation (Category 1), H318 Short-term

(acute) aquatic hazard (Category 1), H400

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 3: Composition/information on ingredients

3.1 Substances

Formula: $\text{Li}_{5.5}\text{PS}_{4.5}\text{Cl}_{1.5}$

Molecular weight: 266.75 g/mol

CAS-No. : Not Available

EC-No. : Not Available

Concentration: $\leq 100\%$

SECTION 4: First aid measures

4.1 Description of first aid measures General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.



SAFETY DATA SHEET

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Seek medical advice immediately. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in section 11.

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

SECTION 5: Firefighting measures

5.1 Extinguishing media Suitable

extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Sulfur oxides

Oxides of phosphorus Hydrogen

chloride gas Lithium oxides

Not combustible.

May not get in touch with: Water

Ambient fire may liberate hazardous vapours.

5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

5.4 Further information

No data available

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully. Dispose of properly. Clean up affected area.



SAFETY DATA SHEET

Avoid generation of dusts.

SECTION 7: Handling and storage

7.1 Precautions for safe handling Advice on safe handling

Work under hood. Do not inhale substance/mixture. Keep workplace dry. Do not allow product to come into contact with water.

Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Air and moisture sensitive. Handle and store under inert gas.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls Appropriate engineering controls

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

Personal protective equipment Eye/face protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection

Flame retardant antistatic protective clothing.

Respiratory protection

required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Control of environmental exposure

Do not let product enter drains. Risk of explosion.

SECTION 9: Physical and chemical properties



SAFETY DATA SHEET

9.1 Information on basic physical and chemical properties

a) Appearance Form:	Powder
b) Odor:	No data available
c) Odor Threshold:	No data available
d) pH:	No data available
e) Melting:	No data available
f) Initial boiling point:	No data available
g) Flash point:	Not applicable
h) Evaporation rate:	No data available
i) Flammability (solid,gas):	No data available

9.2 Other safety information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

sensitive to moisture.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Avoid moisture.

10.5 Incompatible materials

No data available.

10.6 Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects Acute toxicity

Acute toxicity estimate Oral - 100.1 mg/kg (Expert judgment)

Acute toxicity estimate Inhalation - 1.6 mg/l - dust/mist (Expert judgment)

Dermal: No data available **Skin**

corrosion/irritation Remarks:

Causes skin burns. (External MSDS)

Serious eye damage/eye irritation Remarks:

Causes serious eye damage. (External MSDS)

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity No data available **Carcinogenicity**

No data available

Reproductive toxicity

No data available



SAFETY DATA SHEET

Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard No data

available

Additional Information

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12: Ecological information

12.1 Toxicity

Very toxic to aquatic organisms. (External MSDS)

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effect

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information

ADR/RID

WATER-REACTIVE SOLID, CORROSIVE, N.O.S. (Lithium Phosphorus Sulfur Chloride)

IMDG

WATER-REACTIVE SOLID, CORROSIVE, N.O.S. (Lithium Phosphorus Sulfur Chloride)

IATA

Water-reactive solid, corrosive, n.o.s. (Lithium Phosphorus Sulfur Chloride)

SECTION 15: Regulatory information

Please note that waste disposal should also meet the requirements of local regulations.

SECTION 16: Other information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only



SAFETY DATA SHEET

as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

Full text of H-Statements referred to under sections 2 and 3. H228 Flammable solid.

H260 In contact with water releases flammable gases which may ignite spontaneously.

H301 Toxic if swallowed.

H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage.

H332 Harmful if inhaled.

H400 Very toxic to aquatic life.