SAFETY DATA SHEET

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SECTION 1. IDENTIFICATION

Product Identifier: (2N) 99% Lithium Phosphorus Sulfide Chloride

Product Code: LI-PSCL-02-P

CAS Number: N/A

Relevant identified uses of the substance: Scientific research and development

Supplier details:

American Elements
10884 Weyburn Ave.
Los Angeles, CA 90024
Tel: +1 310-208-0551
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Emergency telephone number:
+1 800-424-9300

SECTION 2. HAZARDS IDENTIFICATION

Signal Word: Danger

Hazard Statements:
H228: Flammable solid
H261: In contact with water, releases flammable gas
H301: Toxic if swallowed
H302+H332: Harmful if swallowed or inhaled
H315: Causes skin irritation
H318: Causes serious eye damage
H335: May cause respiratory irritation
H410: Very toxic to aquatic life with long lasting effects
Precautionary Statements:
P210 Keep away from heat/sparks/flame. No smoking.
P231+P232 Handle under inert gas
P240: Ground/bond container and receiving equipment
P241: Use explosion-proof electrical/ventilating/light/.../equipment
P261: Avoid breathing dust/fume/gas/mist/vapours/spray
P264: Wash ... thoroughly after handling

P270: Do not eat, drink or smoke when using this product
P271: Use only outdoors or in a well-ventilated area
P273: Avoid release to the environment
P280: Wear protective gloves/protective clothing/eye protection/face protection
P370+P378: In case of fire: Use dry sand, dry chemical, or alcohol-resistant foam for extinction
P391: Collect spillage
P405: Store locked up
P501: Dispose of contents/container in accordance with local/regional/national/international regulations
HMIS Health Ratings (0-4):
Health: 3
Flammability: 2
Physical: 2

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Lithium Sulfide Phosphorus Sulfide Chloride
CAS-No.: N/A
Formula: Li_6PS_5Cl

SECTION 4. FIRST AID MEASURES

General Treatment:
Seek medical attention if symptoms persist.
Special Treatment: None
Important Symptoms: None
Inhalation: Remove victim to fresh air. Supply oxygen if breathing is difficult.
Ingestion: Do NOT induce vomiting. Rinse mouth with water. Never induce vomiting or give anything by mouth to an unconscious person. Consult a physician.
Skin: Wash affected area with mild soap and water. Remove any contaminated clothing.
Eyes: Flush eyes with water, blinking of ten for several minutes. Remove contact lenses if present and easy to do. Continue rinsing

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SECTION 5. FIREFIGHTING MEASURES

Flammability: Flammable
Reacts violently with water
Extinguishing Media:
Do not use water for metal fires – use CO_2, sand, extinguishing powder.
Spec. Fire Fighting Procedure: Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes.
See section 10 for decomposition products.

SECTION 6. ACCIDENTAL RELEASE MEASURES

If Material Is Released/Spilled:
Wear appropriate respiratory and protective equipment specified in
special protection information. Isolate spill area and provide ventilation. Vacuum up spill using a high

efficiency particulate absolute (HEPA) air filter and place in a closed container for disposal. Take care not to raise dust.
Environmental Precautions:
Isolate runoff to prevent environmental pollution.

SECTION 7. HANDLING AND STORAGE

Handling Conditions:
Handle under dry protective gas.
Wash thoroughly after handling.
Avoid formations of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken inconsideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition – No smoking. Take measures to prevent the build up of electrostatic charge.
Storage Conditions:
Store in a cool, dry place in a tightly sealed container. Store under dry inert gas. Store apart from materials and conditions listed in section 10.
Work/Hygienic Maintenance:
Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air.
Ventilation:
Provide sufficient ventilation to maintain concentration at or below threshold limit.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Permissible Exposure Limits:1mg/m3 as P2S5, long-term value
Threshold Limit Value: N/A
Special Equipment: None
Respiratory Protection: Dust Respirator
Protective Gloves: Nitrile rubber, NBR 0.11mm thick.
Penetration time of glove material: 480 minutes
Eye Protection: Safety glasses or goggles
Body Protection: Protective work clothing. Wear close-toed shoes and long sleeves/pants.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Color: N/A
Form: Solid in various forms
Odor: Rotten eggs
Water Solubility: Reacts violently
Boiling Point: N/A
Melting Point: N/A
Flash Point: N/A
Autoignition Temperature: N/A
Density: N/A
Molecular weight: N/A

SECTION 10. STABILITY AND REACTIVITY

Stability: Stable under recommended storage conditions
Reacts with: Reactions are violent with Water, Acids
Incompatible Conditions/Materials:
Acids, Water/Moisture, Heat, Sparks, Flames
Hazardous Decomposition Products:
Hydrogen sulfide, Lithium oxide, Sulfur oxide, Toxic metal fumes

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SECTION 11. TOXICOLOGICAL INFORMATION

Potential Health Effects:
Eyes: Causes serious eye irritation
Skin: Causes skin irritation
Ingestion: Toxic
Inhalation: May cause irritation
Chronic: N/A
Signs & Symptoms: N/A
Aggravated Medical Conditions: N/A
Median Lethal Dose:
240 mg/kg to rat (Oral)
3160 mg/kg to rabbit (Dermal)
Carcinogen: N/A
Additional Information:
Cough, Shortness of breath, Headache, Nausea, Vomiting, Pulmonary edema. Effects may be delayed. Hydrogen sulfide is strongly bound to methemoglobin in a manner similar to cyanide. Toxicologically, its reaction with enzymes in the blood stream inhibits cell respiration resulting in pulmonary paralysis, sudden collapse, and death. It is recognized by its characteristic odor of "rotten eggs". The detectable, minimum perceptible odor occurs at 0.13ppm, rapid olfactory fatigue can occur at high concentrations (>100 ppm). At concentrations of 20ppm hydrogen sulfide begins acting as an irritant on the mucous membranes of the eyes and respiratory tract and increases with concentration and exposure time. Eye irritation is characterized by irritation of the conjunctiva with photophobia to keratoconjunctivitis and vesiculation of the cornea epithelium. Prolonged exposure to moderate concentrations (250ppm) may cause pulmonary edema. At concentrations over 500ppm, drowsiness, dizziness, excitement, headache, unstable gait, and other systemic symptoms occur within a few minutes. Sudden loss of consciousness without premonition, anxiety, or sense of struggle are characteristic of acute exposure at concentrations above 700ppm. At concentrations of 1000-2000ppm hydrogen sulfide is rapidly absorbed through the lung into the blood. In this range a single inhalation may cause coma and may be rapidly fatal. Initially hyperpnea occurs, followed by rapid collapse and respiratory inhibition. At higher concentrations, hydrogen sulfide exerts an immediate paralyzing effect on the respiratory enters. When concentration reaches 5000 ppm, imminent death almost always results

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SECTION 12. ECOLOGICAL INFORMATION

Aquatic Toxicity: High
Persistent Bioaccumulation Toxicity: N/A
Very Persistent, Very Bioaccumulative: N/A
Notes:
Toxic to aquatic life.
May cause long lasting harmful effect on aquatic life.
Do not allow material to be released to the environment without proper governmental permits.

Do not allow undiluted product or large quantities to reach ground water, water course or sewage system.
Avoid transfer into the environment.
Do not allow product to reach any water sources.
Danger to drinking water if even extremely small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.

SECTION 13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with local, state, national, and international regulations.

SECTION 14. TRANSPORT INFORMATION

Hazardous: Hazardous for transportation.
Hazard Class: 4.3 Substances which in contact with water release flammable gases
Secondary Class: 6.1 Toxic substances
Packing Group: II
UN Number: UN3134
Proper Shipping Name: Water-reactive solid, n.o.s. (Lithium phosphorus sulfide)

SECTION 15. REGULATORY INFORMATION

Sec 302 Extremely Hazardous: N/A
Sec 304 Reportable Quantities: N/A
Sec 313 Toxic Chemicals: N/A

16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only 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. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.