1. Product and Company Identification

Trade Name:	Lithium Phosphorus Sulfur Bromide
Chemical Formula:	Li_6PS_5Br
Recommended Use:	Scientific research and development
Manufacturer/Supplier:	LTS Research Laboratories, Inc.
Street:	37 Ramland Road
City:	Orangeburg
State:	New York
Zip Code:	10962
Country:	USA
Tel #:	855-587-2436 / 855-lts-chem
24-Hour Emergency Contact:	800-424-9300 (US & Canada) +1-703-527-3887 (International)

2. Hazards Identification

Signal Word: Danger

Hazard Statements:
H228 Flammable solid
H260 In contact with water releases flammable gases which may ignite spontaneously
H302+H332 Harmful if swallowed or if inhaled
H315 Causes skin irritation
H317 May cause an allergic skin reaction
H319 Causes serious eye irritation
H400 Very toxic to aquatic life

Precautionary Statements:
P210 Keep away from heat/sparks/open flames/hot surfaces – No smoking.
P223 Keep away from any possible contact with water, because of violent reaction and possible flash fire.
P231+P232 Handle under inert gas. Protect from moisture.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/light/equipment.
P261 Avoid breathing dust/fume/vapor.
P264 Wash skin 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.
P301+P312+P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
P304+P340+P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.
P335+P334 Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.
P362 Take off contaminated clothing and wash before reuse
P363 Wash contaminated clothing before reuse
P370+P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P391 Collect spillage.
P402+P404 Store in a dry place. Store in a closed container.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

HMIS Health Ratings (0-4):

Health:	2
Flammability:	1
Physical:	1

3. Composition

Chemical Family:	Ceramic
Additional Names:	N/A

Lithium Phosphorus Sulfur Bromide (Li_6PS_5Br):

Percentage:	100 wt%
CAS #:	N/A
EC #:	N/A

4. First Aid Procedures

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

5. Firefighting Measures

Flammability:	Flammable
Extinguishing Media:	DO NOT use water. Use dry sand or dry 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.

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. Remove all sources of ignition. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for disposal. Avoid dust formation. Avoid breathing vapors, mist or gas. Evacuate personnel to safety. Do not flush with water.
Environmental Precautions:	Isolate runoff to prevent environmental pollution. Do not let material enter drains. Avoid discharge into the environment.

7. Handling and Storage

Handling Conditions:	Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Handle under dry protective gas. Wash thoroughly after handling. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Keep away from sources of ignition – No smoking. Take measures to prevent the buildup of electrostatic charge.
Storage Conditions:	Store in a cool dry place in a tightly sealed container, in a well-ventilated place. Never allow contact with water. 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.

8. Exposure Controls and Personal Protection

Permissible Exposure Limits:	1 mg/m^3 as P_2S_5, long-term value
Threshold Limit Value:	1 mg/m^3 as P_2S_5, long-term value
Special Equipment:	Properly operating chemical fume hood with average face velocity of at least 100 feet per minute, designed for hazardous chemicals.
Respiratory Protection:	Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Protective Gloves:	Nitrile rubber gloves Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
Eye 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).
Body Protection:	Complete suit protecting against chemical and flame retardant antistatic protective clothing. Wear close-toed shoes and long sleeves/pants.

9. Physical and Chemical Characteristics

Color	N/A
Form:	Powder, Granules, Pellets, Sputtering target, Custom parts
Odor:	N/A
Water Solubility:	N/A
Boiling Point:	N/A
Melting Point:	N/A
Flash Point:	N/A
Autoignition Temperature:	N/A
Density:	N/A g/cc
Molecular weight:	312.85 g/mol

10. Reactivity

Stability:	Stable under recommended storage conditions
Reacts With:	Water, Oxidizing agents, Acids, Alcohols
Incompatible Conditions:	Water/ Moisture, Acid Heat, Flames, Sparks
Hazardous Decomposition Products:	Metal oxide fume, Lithium oxide, Hydrogen Bromide, Sulphur oxides, Oxides of Phosphorus

11. Toxicological Information

Potential Health Effects:

Eyes:	Causes serious eye irritation
Skin:	Causes skin irritation
Ingestion:	Harmful if swallowed
Inhalation:	May cause irritation
Chronic:	N/A

Signs & Symptoms:	N/A
Aggravated Medical Conditions:	N/A
Median Lethal Dose:	389 mg/kg for rat by mouth as P_2S_5
Carcinogen:	N/A

12. Ecological Information

Aquatic Toxicity:	Toxic
Persistent Bioaccumulation Toxicity:	N/A
Very Persistent, Very Bio-accumulative:	N/A
Notes:	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life.

13. Disposal Considerations

Dispose of in accordance with local, state, national, and international regulations. Contact a licensed professional waste disposal service to dispose of this material.

14. Transportation Data

Hazardous: Hazardous for transportation

Hazard Class: 4.3 Dangerous when Wet
Secondary Class: 4.1 Flammable Solids
Packing Group: II
UN Number: 3134
Proper Shipping Name: Lithium Phosphorus Sulfur Bromide

15. Regulatory Information

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

16. Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

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