



MATERIAL SAFETY DATA SHEET

www.msesupplies.com
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Tucson AZ 85711
Tel: 5207896673
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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Li₁₀GeP₂S₁₂ Solid State Electrolyte
MANUFACTURER: MSE Supplies LLC
DIVISION: MSE Supplies Battery Division
ADDRESS: MSE Supplies LLC, 4400 E Broadway Blvd, Suite 600, Tucson AZ 85711 USA
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SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>
Li ₁₀ GeP ₂ S ₁₂	Not available

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Powder

Odor, Color, Grade: Rotten Egg smell, grey color

General Physical Form: Solid

Immediate health, physical, and environmental hazards: This document has been prepared in accordance with the U.S. OSHA Hazard Communication Standard, which requires the inclusion of all known hazards of the product or ingredients regardless of the potential risk. The risks of the hazards communicated in this document may vary depending on the potential for exposure.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:

Mechanical eye irritation: Signs/symptoms may include pain, redness, tearing and corneal abrasion.

Skin Contact:

Mechanical Skin irritation: Signs/symptoms may include abrasion, redness, pain, and itching.

Inhalation:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.



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Eye Contact: Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

Skin Contact: Wash affected area with soap and water. If signs/symptoms develop, get medical attention.

Inhalation: Remove person to fresh air. If signs/symptoms develop, get medical attention.

If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 EXTINGUISHING MEDIA

Suitable extinguishing media

Dry powder Dry sand

Unsuitable extinguishing media

Do NOT use water jet.

5.2 Special hazards arising from the substance or mixture

No data available

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Avoid breathing dust.

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided

6.3 Methods and materials for containment and cleaning up

Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wetbrushing and place in container for disposal according to local regulations (see section 13). Do not flush with water. Keep in suitable, closed containers for disposal.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Avoid contact with skin and eyes. Avoid formation 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 into consideration 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.



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7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Never allow product to get in contact with water during storage. Keep in a dry place.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Not applicable.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 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).

8.2.2 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.

8.2.3 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).

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Do not ingest.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific Physical Form:	Powder
Odor, Color, Grade:	Rotten egg smell when exposed to water. Grey powder
General Physical Form:	Solid
Autoignition temperature	<i>No Data Available</i>
Flash Point	No flash point
Flammable Limits(LEL)	<i>Not Applicable</i>
Flammable Limits(UEL)	<i>Not Applicable</i>
Boiling Point	<i>Not Applicable</i>
Vapor Density	<i>Not Applicable</i>
Vapor Pressure	<i>Not Applicable</i>
Specific Gravity	< 1.0 [Ref Std: WATER=1]
pH	8-9
Melting point	<i>decompose</i>
Solubility in Water	<i>No Data Available</i>
Evaporation rate	<i>Not Applicable</i>



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Volatile Organic Compounds	<i>Not Applicable</i>
Kow - Oct/Water partition coef	<i>No Data Available</i>
Percent volatile	<i>No Data Available</i>
VOC Less H2O & Exempt Solvents	<i>Not Applicable</i>
Viscosity	<i>Not Applicable</i>

SECTION 10: STABILITY AND REACTIVITY

Stability: *No Data Available*

Materials and Conditions to Avoid:

10.1 Conditions to avoid

Exposure to moisture

10.2 Materials to avoid

Not known

10.3 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Sulphur oxides, Oxides of phosphorus Other decomposition products - No data available

SECTION 11: TOXICOLOGICAL INFORMATION

Acute toxicity

No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available

CHEMICAL FATE INFORMATION

No data available

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method:

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

EPA Hazardous Waste Number (RCRA): Not regulated



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SECTION 14: TRANSPORT INFORMATION

DOT (US)

Not Regulated

IMDG

Not regulated

IATA

Not regulated

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

No data Available

INTERNATIONAL REGULATIONS

Not available

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health: 1 Flammability: 1 Reactivity: 0 Special Hazards: None

Disclaimer: MSE Supplies LLC cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. This document has been prepared using data from sources considered to be technically reliable and the information is believed to be correct. MSE Supplies LLC makes no warranties, expressed or implied, as to the accuracy of the information contained herein. MSE Supplies cannot anticipate all conditions under which this information and its products may be used and the actual conditions of use are beyond its control. The user is responsible to evaluate all available information when using this product for any particular use and to comply with all Federal, State, Provincial and Local laws, statutes and regulations.