

Specification and Safety Data Sheet

LGPS (Li₁₀GeP₂S₁₂) Powder with High Ion-Conductivity

1. Product and Company Identification

Product Name: EQ-Lib-LGPS
CAS#: N/A
Chemical Formula: Li₁₀GeP₂S₁₂
Identified uses: Scientific research and development

Contact Information: MTI Corporation
 860 South 19th Street
 Richmond, CA 94804, USA
 Tel: 510-525-3070
 Fax: 510-525-4705
 Email: info@mtixtl.com
 Website: www.mtixtl.com

Non-emergency assistance: 1-888-525-3070

Emergency assistance: Company: CHEMTEL (MTI Contract# MIS2559467) Day or Night
 Tel (Within USA and Canada): 1-800-255-3924
 Tel (Outside USA and Canada): 1-813-248-0585

2. Hazards Identification

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

GHS 07

Acute Tox. 4	H302	Harmful if swallowed
Skin Irrit. 2	H315	Causes skin irritation
Eye Irrit. 2A	H319	May cause respiratory irritation

HMIS Rating

Health hazard: 2
 Chronic Health Hazard:
 Flammability: 0
 Physical Hazard 1

GHS Label elements, including precautionary statements

Signal Word

Warning



Hazard statement(s)

H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.



Precautionary Statement(s)

P261	Avoid Breathing dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national /international regulations.

Hazards not otherwise classified (HNOC) or not covered by GHS

No data available

3. Composition/Information on Ingredients

Substance Name: LGPS**Formula:** $\text{Li}_{10}\text{GeP}_2\text{S}_{12}$ **Molecular Weight:** 588.69 g/mol

4. First Aid Measures

4.1 Description of first aid measures**If inhaled**

Supply patient with fresh air. If not breathing, provide artificial respiration. Keep patient warm. Seek immediate medical advice.

In case of skin contact

Immediately wash with soap and water; rinse thoroughly.

In case of eye contact

Rinse opened eye for fifteen minutes under running water. Consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Seek medical treatment.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

5. Firefighting Measures

5.1 Extinguishing media**Suitable extinguishing media**

Product is not flammable. Use fire-fighting measures that suit the surrounding fire.

5.2 Special hazards arising from the substance mixture

Phosphorus oxides, Lithium oxides, Germanium oxides

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Keep unprotected persons away. Ensure adequate ventilation.
For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Dispose of contaminated material as waste according to section 13.

6.4 Reference to other sections

For disposal see section 13.

7. Handling and Storage

7.1 Precautions for safe handling

Keep container tightly sealed. Store in cool, dry place in tightly closed containers. Ensure good ventilation at the workplace.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Store away from oxidizing agents.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. Exposure Control/ Personal Protection

8.1 Control parameters

Components with workplace control parameters

None.

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. Avoid contact with the eyes and skin.

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.

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection



Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) 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).

Control of environmental exposure

Do not let product enter drains.

9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

a) Appearance	Form: Solid
b) Odor	Odorless
c) Odor Threshold	No data available
d) pH	No data available
e) Melting point/freezing point	No data available
f) Initial boiling point and boiling range	No data available
g) Flash point	No data available
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	No data available
k) Vapor pressure	No data available
l) Vapor density	No data available
m) Relative density	No data available
n) Water solubility	No data available
o) Partition coefficient: n-octanol/water	No data available
p) Auto-ignition temperature	No data available
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosive properties	No data available
t) Oxidizing properties	No data available

10. Stability and Reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions



No data available

10.4 Conditions to avoid

No data available

10.5 Incompatible materials

Strong oxidizing agents

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. – Phosphorus oxides, Lithium oxide

Other decomposition products - No data available

In the event of fire: see section 5

11. Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

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.

12. Ecological Information

12.1 Toxicity

No data available

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

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

12.6 Other adverse effects

No data available

13. Disposal Considerations

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

14. Transport Information

DOT (US)

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

15. Regulatory Information

SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

No SARA Hazards

Massachusetts Right to Know Components

No components are subject to the Massachusetts Right to Know Act

Pennsylvania Right to Know Components

CAS-No.

Revision Date

LGPS

New Jersey Right to Know Components

LGPS

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. Other Information

The information above is believed to be accurate and represents the best information currently available to us. However, it does not represent any guarantee of the properties of the product. We make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we shall not be held liable for any damage resulting from handling or from contact with the above product. Users should make their own investigations to determine the suitability of the information for their particular purposes.