

# SAFETY DATA SHEET

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## SECTION 1. IDENTIFICATION

**Product Name:** Lithium Phosphate Sputtering Target

**Product Number:** All applicable American Elements product codes, e.g. LI-PAT-02-ST , LI-PAT-025-ST , LI-PAT-03-ST , LI-PAT-035-ST , LI-PAT-04-ST , LI-PAT-05-ST

**CAS #:** 10377-52-3

**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  
Fax: +1 310-208-0351

**Emergency telephone number:**

+1 800-424-9300

## SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)  
GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

STOT SE 3 H335 May cause respiratory irritation.

Hazards not otherwise classified No data available

GHS label elements, including precautionary statements



Hazard pictograms

GHS07

Signal word Warning

Hazard statements

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

#### Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapors/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.

#### WHMIS classification

D2B - Toxic material causing other toxic effects

#### Classification system

HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

HEALTH

FIRE

REACTIVITY

2

0

1

Health (acute effects) = 2

Flammability = 0

Physical Hazard = 1

Other hazards

Results of PBT and vPvB assessment

PBT: N/A

vPvB: N/A

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## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Substances

CAS No. / Substance Name:

10377-52-3 Lithium phosphate anhydrous

Identification number(s):

EC number: 233-823-0

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## SECTION 4. FIRST AID MEASURES

#### 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.

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## SECTION 5. FIREFIGHTING MEASURES

#### Extinguishing media

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

Special hazards arising from the substance or mixture

If this product is involved in a fire, the following can be released:

Phosphorus oxides

Lithium oxide

Advice for firefighters

Protective equipment:

Wear self-contained respirator.

Wear fully protective impervious suit.

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## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Environmental precautions: Do not allow product to enter drains, sewage systems, or other water courses.

Methods and materials for containment and cleanup:

Dispose of contaminated material as waste according to section 13.

Ensure adequate ventilation.

Prevention of secondary hazards: No special measures required.

Reference to other sections

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

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## **SECTION 7. HANDLING AND STORAGE**

Handling

Precautions for safe handling

Keep container tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation at the workplace.

Information about protection against explosions and fires: The product is not flammable

Conditions for safe storage, including any incompatibilities

Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility: Store away from oxidizing agents.

Further information about storage conditions:

Keep container tightly sealed.

Store in cool, dry conditions in well-sealed containers.

Specific end use(s) No data available

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## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Additional information about design of technical systems:

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Control parameters

Components with limit values that require monitoring at the workplace:

None.

Additional information: No data

Exposure controls

Personal protective equipment

Follow typical protective and hygienic practices for handling chemicals.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Maintain an ergonomically appropriate working environment.

Breathing equipment: Use suitable respirator when high concentrations are present.

Recommended filter device for short term use:

Use a respirator with type P100 (USA) or P3 (EN 143) cartridges as a backup to engineering controls.

Risk assessment should be performed to determine if airpurifying

respirators are appropriate. Only use equipment tested and approved under appropriate government standards.

Protection of hands:

Impervious gloves

Inspect gloves prior to use.

The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer.

Material of gloves Nitrile rubber, NBR

Penetration time of glove material (in minutes) 480

Glove thickness 0.11 mm

Eye protection: Safety glasses

Body protection: Protective work clothing.

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance:

Form: Powder

Color: White

Odor: Odorless

Odor threshold: No data available.

pH: N/A

Melting point/Melting range: 1205 °C (2201 °F)

Boiling point/Boiling range: No data available

Sublimation temperature / start: No data available

Flammability (solid, gas) No data available.

Ignition temperature: No data available

Decomposition temperature: No data available

Autoignition: No data available.

Danger of explosion: No data available.

Explosion limits:

Lower: No data available

Upper: No data available

Vapor pressure: N/A

Density at 20 °C (68 °F): 2.537 g/cm<sup>3</sup> (21.171 lbs/gal)

Relative density No data available.

Vapor density N/A

Evaporation rate N/A

Solubility in / Miscibility with

Water at 18 °C (64 °F): 0.39 g/l  
Partition coefficient (n-octanol/water): No data available.  
Viscosity:  
Dynamic: N/A  
Kinematic: N/A  
Other information No data available

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## **SECTION 10. STABILITY AND REACTIVITY**

Reactivity No data available  
Chemical stability Stable under recommended storage conditions.  
Thermal decomposition / conditions to be avoided: Decomposition will not occur if used and stored according to specifications.  
Possibility of hazardous reactions Reacts with strong oxidizing agents  
Conditions to avoid No data available  
Incompatible materials: Oxidizing agents  
Hazardous decomposition products:  
Phosphorus oxides (e.g. P<sub>2</sub>O<sub>5</sub>)  
Lithium oxide

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## **SECTION 11. TOXICOLOGICAL INFORMATION**

Information on toxicological effects  
Acute toxicity: Harmful if swallowed.  
LD/LC<sub>50</sub> values that are relevant for classification: No data  
Skin irritation or corrosion: Causes skin irritation.  
Eye irritation or corrosion: Causes serious eye irritation.  
Sensitization: No sensitizing effects known.  
Germ cell mutagenicity: No effects known.  
Carcinogenicity: No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.  
Reproductive toxicity: No effects known.  
Specific target organ system toxicity - repeated exposure: No effects known.  
Specific target organ system toxicity - single exposure: May cause respiratory irritation.  
Aspiration hazard: No effects known.  
Subacute to chronic toxicity: No effects known.  
Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

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## **SECTION 12. ECOLOGICAL INFORMATION**

Toxicity  
Aquatic toxicity: No data available  
Persistence and degradability No data available  
Bioaccumulative potential No data available  
Mobility in soil No data available  
Additional ecological information:  
Do not allow undiluted product or large quantities to reach groundwater, water courses, or sewage systems.  
Avoid transfer into the environment.

Results of PBT and vPvB assessment  
PBT: N/A  
vPvB: N/A  
Other adverse effects No data available

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## **SECTION 13. DISPOSAL CONSIDERATIONS**

Waste treatment methods  
Recommendation Consult official regulations to ensure proper disposal.  
Uncleaned packagings:  
Recommendation: Disposal must be made according to official regulations.

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## **SECTION 14. TRANSPORT INFORMATION**

UN-Number  
DOT, ADN, IMDG, IATA N/A  
UN proper shipping name  
DOT, ADN, IMDG, IATA N/A  
Transport hazard class(es)  
DOT, ADR, ADN, IMDG, IATA  
Class N/A  
Packing group  
DOT, IMDG, IATA N/A  
Environmental hazards: N/A  
Special precautions for user N/A  
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code N/A  
Transport/Additional information:  
DOT  
Marine Pollutant (DOT): No  
UN "Model Regulation": -

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## **SECTION 15. REGULATORY INFORMATION**

Packing group  
DOT, IMDG, IATA N/A  
Environmental hazards: N/A  
Special precautions for user N/A  
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code N/A  
Transport/Additional information:  
DOT  
Marine Pollutant (DOT): No  
UN "Model Regulation": -

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## **SECTION 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

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