STANFORD

Revision Date: Mar 2018

Safety Data Sheet

1. Product and Company Identification

Product Name: Lithium aluminum titanium phosphate

CAS#: 120479-61-0

Identified uses: Laboratory chemicals, Research

Formula: $Li_{1.5}AI_{0.5}Ti_{1.5}(PO_4)_3$

380.62 g/mol **Molecular Weight**

Contact Information: Stanford Advanced Materials

E-mail: sales@samaterials.com

Tel: (949) 407-8904

Address: 23661 Birtcher Dr., Lake Forest, CA 92630 U.S.A.

Non-emergency assistance: 1-(949) 407-8904

Emergency assistance: Company: (949) 407-8904

2. Hazards Identification

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

Not a hazardous substance or mixture.

HMIS Rating

Health hazard: 0

Chronic Health Hazard: *

Flammability: 0 Physical Hazard 0

NFPA Rating

Health hazard: 0 Fire Hazard: 0

Reactivity Hazard: 0

GHS Label elements, including precautionary statements

Not a hazardous substance or mixture.

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

None

3. Composition/Information on Ingredients

Synonyms: Lithium aluminum titanium phosphate

Formula: Li_{1.5}Al_{0.5}Ti_{1.5}(PO₄)₃
Molecular Weight: 380.62 g/mol

Other Name: LATP

CAS-No.: 120479-61-0

No components need to be disclosed according to the applicable regulations.

4. First Aid Measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

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If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

In case of skin contact

Wash off with soap and plenty of water.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water.

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

Use water spray, alcohol resistant-foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance mixture

Lithium oxides, Aluminum oxides, Titanium/Titanium oxides, Phosphorus oxides

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further Information

No data available.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing vapors, mist or gas. For personal protection see section 8.

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6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

7. Handling and Storage

7.1 Precautions for safe handling

Provide appropriate exhaust ventilation at places where dust is formed.

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.

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

Contains no substances with occupational exposure limit values.

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.

Personal protective equipment

Eye/face protection

Face shield and safety glasses 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.

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

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Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. 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: Powder
b) Odor		 No data available
c) Odor Threshold		No data available
d) pH		No data available
e) Melting point/freezing point		No data available
f) Initial boiling point and	:	 No data available
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		No data available
explosive limits		
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/wa	ter	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

9.2 Other safety information

No data available

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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 acids

10.6 Hazardous decomposition products

In the event of fire: see section 5

11. Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

No data available

Inhalation: No data available Dermal: No data available

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.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified

as a carcinogen or potential carcinogen by ACGIH.

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

RTECS: Not available

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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.

Lithium aluminum titanium phosphate 120479-61-0

New Jersey Right to Know Components

Lithium aluminum titanium phosphate 120479-61-0

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.

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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.