Revision Date: Mar 2024

beyond battery

1. Product and Company Identification

Product Name:	Lithium Aluminum Titanium Phosphate
CAS#:	120479-61-0
Chemical Formula:	$Li_{1.3}Al_{0.3}Ti_{1.7}(PO_4)_3$
Identified uses:	Laboratory chemicals, Manufacture of substances
Contact Information:	Beyond Battery PTE. LTD. BLK 81 Ayer Rajah Crescent, #03-55, Singapore 139967 Email: tech@beyond-battery.com Website: https://beyond-battery. com/

2. Hazards Identification

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

Not a hazardous substance or mixture.

GHS Label elements, including precautionary statements

No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s) required.

Other hazards which do not result in classification

None known.

3. Composition/Information on Ingredients

Substance Name: Lithium Aluminum Titanium Phosphate

Synonyms: LATP

Formula: $Li_{1.3}Al_{0.3}Ti_{1.7}(PO_4)_3$

CAS No: 120479-61-0

Concentration: 100%

Components

No hazard ingredients

4. First Aid Measures

4.1 Description of first aid measures

If inhaled

If breathed in, move the person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In the case of eye contact.

Flush eyes with water as a precaution.

In case of skin contact

Wash off with soap and plenty of water.

If swallowed

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

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

Specific hazards during fire fighting: Combustible.
Development of hazardous combustion gases or va- pours possible in the event of fire.

Hazardous combustion products:
Oxides of phosphorus
Titanium/titanium oxides
Lithium oxides
Aluminum oxide

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

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. 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

Use neutralizing agent. Pick up and arrange disposal without creating dust. Keep in 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

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dust. 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.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly sealed, in a cool, dry place under inert gas. This material is moisture and air sensitive. Protect from humidity and keep away from water. Keep away from oxidizing agents. Store in a locked cabinet or with access restricted to technical experts or their assistants. Also see Section 10.5.

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

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 the workday.

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).

Respiratory protection

Required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type

Filter type P1

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to instructions of the producer. These measures have to be properly documented.

Hand 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.

Material	Nitrile rubber
Break through time	480 min
Glove thickness	0.11 mm
Protective index	Full contact
Manufacturer	KCL 741 Dermatril® L

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D- 36124 Eichenzell, Internet: www.kcl.de).

9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

a) Appearance	Powder
	Colour: No data available
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	No data available
boiling range	No data available
g) Flash point	No Applicable
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or	No data available
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

9.2 Other safety information
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 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
Oral LD50: No Data Available
Inhalation LC50: No Data Available
Dermal LD50: 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

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

May cause respiratory irritation

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 of this product 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
No data available

12.6 Other adverse effects
No data available

13. Disposal Considerations

13.1 Waste treatment methods-Product
Waste material must be disposed of in accordance
with the national and local regulations Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

14. Transport Information

DOT (US)
Not dangerous

IMDG
Not dangerous

IATA

Not dangerous goods

15. Regulatory Information

A chemical safety assessment was not carried out for this product.

16. Other Information

Further 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.