

Lithium Titanate Powder

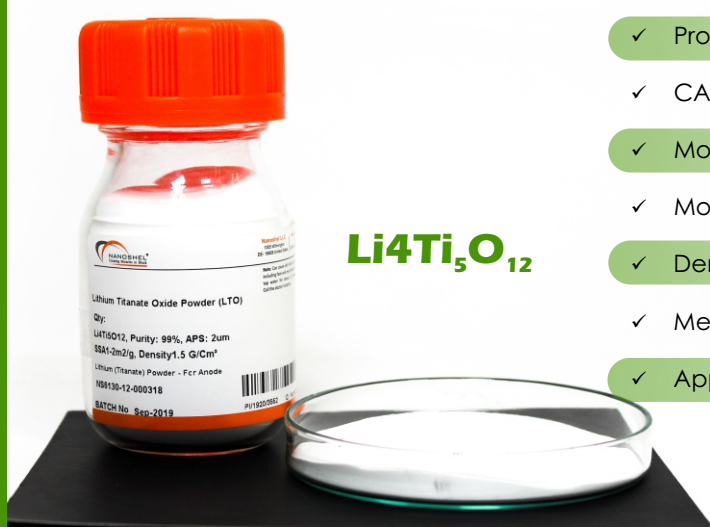
Stock No.
NS6130-13-000318

Lithium titanate ($\text{Li}_4\text{Ti}_5\text{O}_{12}$, LTO) has emerged as an alternative anode material for rechargeable lithium ion (Li^+) batteries with the potential for long cycle life, superior safety, better low-temperature performance, and higher power density compared to their graphite-based counterparts. Lithium titanate oxide is considered as the most promising anode material for lithium-ion battery owing to its fast charging capability.

Lithium titanate has already become one of the most attractive anode materials for lithium-ion batteries (LIBs), due to the zero-strain insertion, high safety, and excellent cycle stability. Research has been carried out on the alternative anode materials that have good safety, good cycling stability, and high rate performance. Li-titanate has a nominal cell voltage of 2.40V, can be fast charged and delivers a high discharge current of 10C, or 10 times the rated capacity. The cycle count is said to be higher than that of a regular Li-ion. Li-titanate is safe, has excellent low-temperature discharge characteristics and obtains a capacity of 80 percent at -30°C (-22°F).

QUICK Facts

✓ Product	:	Lithium Titanate Powder
✓ CAS	:	12031-95-7
✓ Molecular Formula	:	$\text{Li}_4\text{Ti}_5\text{O}_{12}$
✓ Molecular Weight	:	459.09 g/mol
✓ Density	:	$3.5\text{g}/\text{cm}^3$
✓ Melting point	:	$>1000^\circ\text{C}$
✓ Appearance	:	Gray/Black Powder



Advantages of Lithium Titanate Powder:

Lithium Titanate based batteries considering that they have several crucial advantages over their more prolific competition, the Lithium Ion battery. The main points on which they do better are:

- ✓ Long lifespan
- ✓ Rapid charging
- ✓ Less risk of auto-combustion
- ✓ Operates better in low temperatures than Lithium Ion batteries
- ✓ LTO battery work good at both high temperature and low temperature, range -40 - 60°C
- ✓ LTO battery with high safety level and very stable (No fire, no explosion)
- ✓ LTO battery rechargeable and green

Lithium Titanate Powder



Lithium Titanate Powder

Stock No.
NS6130-12-000318

PROPERTIES of Lithium Titanate Powder

Extremely Long Lifetime:

The advanced nanotechnology consisting of lithium-titanate nanocrystals and their increased surface area are especially designed to enhance the lifetime of these batteries. With an over 30 times larger surface area, this technology is able to recharge substantially faster than it's more traditional alternative, the Li-Ion battery.

Rapid Battery Charging and Discharging:

Lithium Titanate Oxide (lithium titanium oxide) batteries (LTO) are advanced modified lithium-ion battery that employs nano-technology in the form of lithium titanate nanocrystals instead of normal carbon material on its surface.

APPLICATIONS

- ✓ Military, aerospace
- ✓ Electric vehicles and charging stations
- ✓ Tourist coaches, yachts
- ✓ Wind and solar energy storage power
- ✓ Traffic signals
- ✓ Solar hybrid street lighting
- ✓ UPS power supply, home storage
- ✓ Disaster relief emergency,
- ✓ Weather radar, electricity,
- ✓ Smart grid, communication base stations, hospitals, finance,
- ✓ Telecommunications as well as system critical backup power systems.



PACKING SIZES :

25Gms, 50Gms, 100Gms, 500Gms, 1Kg & Bulk Orders



ISO 9001:2015
CERTIFIED COMPANY

INTELLIGENT MATERIALS PVT LTD

Derabassi
Punjab (140507)
INDIA

+91 9779 550077, 9779238252

NANOSHEL UK LIMITED

Chapel House,
Chapel St Cheshire,
CW12 4AB United Kingdom

+44 (0) 74 105 488, +44 203 137 5187

NANOSHEL LLC

3422 Old Capitol Suit
1305 Wilmington DE - 19808
United States

+1 646 470 4911

