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LECTRO® MAX POWDER 100, SLMP®

CAS No. 7439-93-2

QS-PDS-2060 Revision: 00

Appearance

Lectro® Max Powder, Stabilized Lithium Metal Powder (SLMP®), is a gray powder.

Applications

Lectro® Max Powder (SLMP®) enables a new generation of Li-ion batteries by providing an independent source for lithium, which opens up choices for both anode and cathode materials. Introducing lithium in a stabilized powder form with the anode host material, such as Si and Sn-based, to form a lithium-ion system leads to a higher energy battery with more efficient utilization of lithium. Using non-lithium providing cathodes like manganese, vanadium or other metal oxides and metal fluorides that are more overcharge tolerant and potentially have lower costs, leads to safer and cheaper batteries. When used in combination, these materials can potentially double the energy density of the current lithium-ion battery.

Lectro® Max Powder (SLMP®) could be used to replace thin lithium foil applications and in Fusion Research Devices to improve plasma performance.

Product Specifications

Li, wt. %	97.0 min
Li_2CO_3 wt. %	0.5 min
Cl, wppm	100 max
N, wppm	500 max
Na, wppm	300 max
Ca, wppm	300 max
Fe, wppm	300 max
Si, wppm	300 max
K, wppm	100 max
Malvern D50, μm	25 - 50

Physical Properties

Formula weight	6.94
True density	0.534 g/cm^3
Melting point	180.5°C

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Toxicity/Safety Data

Flammable solid. Water reactive. Reacts violently with water to give off corrosive dust and flammable hydrogen gas. Elevated temperatures, above melting point (180.5ºC/357ºF), can result in spontaneous ignition in humid air.

Corrosive to eyes (may cause blindness), skin, nose, throat and stomach. Continuous inhalation exposure may cause lung damage

COMPLETE INFORMATION ON TOXICITY AND SAFETY IS CONTAINED IN THE FMC NEW PRODUCT DATA SHEET (NPDS) AVAILABLE FOR THIS PRODUCT.

Handling/Storage/Disposal

Can be handled in open atmosphere at room temperature, either coated with mineral oil or where relative humidity is maintained below 50%. To maintain best quality, humidity levels of less than 2% are recommended. Do not get in eyes, on skin or clothing. Avoid breathing dust. Wear safety glasses or goggles and dry rubber gloves.

Store in original unopened shipping container. Once opened, store in argon atmosphere or mineral oil. Keep away from water, humid air, acids and oxidizing materials. Keep away from heat, sparks and flame.

Shipping Limitations

Shipments of lithium metal are described as "Lithium,Mixture UN1415," PG I. All shipments are Hazard Class 4.3 and require "Dangerous When Wet" labels.

Post, Parcel	Not acceptable	
Sea	Class 4.3	(IMDG)
Road, Rail	Class 4.3.11 a	(RID/ADR)
Air	15kg max.	Cargo aircraft only

For shipments within Europe labeling for supply requirements are:

F	Highly Flammable
C	Corrosive
R&S phrases	See Material Safety Data Sheet (MSDS for Lithium metal)

Responsible Care® initiative dictates that all shipments of lithium chemicals must be transported in an approved vehicle in a responsible manner (i.e., no flat bed trucks).