

Battery Cathode Material Lithium Manganese Iron Phosphate Lmfp Powder

Item Number: CL13



Introduction

High performance lithium manganese iron phosphate LMFP battery cathode material powder engineered for next generation energy storage delivering 154.4 mAh per gram discharge capacity exceptional thermal safety superior voltage plateau stability and high first cycle efficiency for demanding electrochemical applications

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Application	Description	Key Benefit
Electric Vehicle (EV) Traction Cells	Formulating high-energy pouch and prismatic battery cells for electric passenger cars, light commercial vehicles, and electric buses.	Delivers up to 15-20% higher energy density than standard LFP while maintaining superior abuse tolerance and fire safety.
Stationary Grid Energy Storage Systems	Implementing long-duration utility and commercial battery storage modules designed for peak shaving and renewable integration.	Exceptional cycle life and chemical stability lower levelized cost of storage (LCOS) without requiring complex active cooling systems.
Low-Temperature Specialty Power	Powering drones, robotics, and industrial field equipment operating in sub-zero and fluctuating ambient temperatures.	Sub-micron D50 of 0.936 μm enables rapid ion kinetics and reduces polarization at low operating temperatures.
Solid-State Battery Research	Serving as a high-voltage, chemically stable cathode active material paired with sulfide, oxide, or polymer solid electrolytes.	Low moisture content (599.2 ppm) and stable olivine surface minimize side reactions at reactive solid electrolyte interfaces.
High-Rate Industrial Power Tools	Fabricating cylindrical 18650 and 21700 high-power cells for cordless tools, electric watercraft, and garden equipment.	Robust carbon conductive network (1.88% C) supports stable power delivery and rapid recharge capability.
Next-Generation Blend Cathodes	Blending with nickel-rich NMC/NCA chemistries to enhance composite thermal stability, reduce cost, and improve pack-level safety.	Acts as an internal thermal buffer and stabilizes overcharge events in hybrid cathode formulations.

Specification Category	Parameter	Value	Unit
Product Identification	Item Number	CL13	-
Particle Size Distribution	D10	0.327	μm
	D50	0.936	μm
	D90	14.786	μm
Physical & Surface Properties	Specific Surface Area (BET)	19.34	m^2/g
	Tap Density	0.98	g/cm^3
	Moisture Content	599.2	ppm
Chemical Composition	Lithium (Li)	4.3	%
	Manganese (Mn)	20.83	%
	Iron (Fe)	13.96	%
	Phosphorus (P)	19.01	%
	Carbon (C)	1.88	%

Specification Category	Parameter	Value	Unit
Electrochemical Performance	0.2C First Discharge Capacity	154.4	mAh/g
	0.2C Initial Discharge Efficiency	93.26	%