

NMC 442 Cathode Material

Catlog Number: BMCM-0014

• Description

A stable ternary cathode material with a balanced manganese and nickel ratio, providing a safe and cost-effective solution for large-scale energy storage.

• Basic Information

Chemical Formula: $\text{LiNi}_0.4\text{Mn}_0.4\text{Co}_0.2\text{O}_2$

Appearance: Black Powder

Molecular Weight: 96.48 g/mol

D50 Particle Size: 8 - 12 μm

Tap Density: $\geq 2.3 \text{ g/cm}^3$

BET Surface Area: 0.2 - 0.5 m^2/g

1st Discharge Capacity: $\geq 165 \text{ mAh/g}$

1st Coulombic Efficiency: $\geq 91\%$

pH Value: ≤ 11.0

Moisture Content: $\leq 0.05\%$

Magnetic Impurities: $\leq 50 \text{ ppb}$

Li/Na Content: 7.1 - 7.5%

Ni Content: 24 - 26%

Mn Content: 22 - 24%

Co Content: 12 - 14%

Transition Metals: Ni-Mn-Co

Crystal Structure: Layered Structure

Compaction Density: $\geq 3.4 \text{ g/cm}^3$

Storage Conditions: Dry room, sealed

Conductivity: $\sim 10^{-4} \text{ S/cm}$

Voltage Range: 3.0 - 4.3 V

Purity: $\geq 99.9\%$

Primary Application: Energy Storage

Thermal Stability: High

Cycle Life: > 2000 cycles

 For Research or Industrial Raw Materials, Not For Personal Medical Use!