

NMC 811 (Single Crystal)

Catlog Number: BMCM-0022

• Description

High-nickel NMC 811 in single-crystal form to eliminate grain boundaries, reducing side reactions with electrolyte and improving high-voltage stability.

• Basic Information

Chemical Formula: $\text{LiNi}_0.8\text{Mn}_0.1\text{Co}_0.1\text{O}_2$

Appearance: Dark Grey Powder

Molecular Weight: 97.28 g/mol

D50 Particle Size: 3 - 6 μm

Tap Density: $\geq 2.4 \text{ g/cm}^3$

BET Surface Area: 0.3 - 0.7 m^2/g

1st Discharge Capacity: $\geq 200 \text{ mAh/g}$

1st Coulombic Efficiency: $\geq 87\%$

pH Value: ≤ 11.5

Moisture Content: $\leq 0.05\%$

Magnetic Impurities: $\leq 20 \text{ ppb}$

Li/Na Content: 7.1 - 7.5%

Ni Content: 48 - 50%

Mn Content: 5.5 - 6.5%

Co Content: 5.5 - 6.5%

Transition Metals: Ni-Mn-Co

Crystal Structure: Single Crystal Layered

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

Storage Conditions: Inert gas storage

Conductivity: $\sim 10^{-3} \text{ S/cm}$

Voltage Range: 2.8 - 4.3 V

Purity: $\geq 99.9\%$

Primary Application: Long-range EV batteries

Thermal Stability: High

Cycle Life: > 2000 cycles

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