

## NMC 811 Cathode Material

Catlog Number: BMCM-0039

### • Description

High-nickel ternary cathode material providing significantly higher energy density for advanced long-range electric vehicle battery packs.

### • 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: 9 - 12  $\mu\text{m}$

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

BET Surface Area: 0.3 - 0.8  $\text{m}^2/\text{g}$

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

1st Coulombic Efficiency:  $\geq 88\%$

pH Value:  $\leq 11.8$

Moisture Content:  $\leq 0.08\%$

Magnetic Impurities:  $\leq 30 \text{ ppb}$

Li/Na Content: 7.1 - 7.4%

Ni Content: 48 - 50%

Mn Content: 5.5 - 6.5%

Co Content: 5.5 - 6.5%

Transition Metals:  $\leq 0.005\%$

P Content: N/A

Al Content: N/A

Crystal Structure: Layered  $\alpha\text{-NaFeO}_2$

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

Storage Conditions: Inert gas storage

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

Voltage Range: 2.8 - 4.3 V

Purity:  $\geq 99.8\%$

Primary Application: Long-range Electric Vehicles

Thermal Stability: Good

Cycle Life:  $> 1000$  cycles

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