

Sodium Iron Manganese Oxide

Catlog Number: BMCM-0019

• Description

Low-cost layered oxide cathode for sodium-ion batteries, utilizing earth-abundant iron and manganese for large-scale energy storage applications.

• Basic Information

Chemical Formula: $\text{Na}[\text{Fe}_{1/2}\text{Mn}_{1/2}]\text{O}_2$

Appearance: Black Powder

Molecular Weight: 108.38 g/mol

D50 Particle Size: 4 - 8 μm

Tap Density: $\geq 1.4 \text{ g/cm}^3$

BET Surface Area: 1.5 - 3.5 m^2/g

1st Discharge Capacity: $\geq 130 \text{ mAh/g}$

1st Coulombic Efficiency: $\geq 95\%$

pH Value: 9.0 - 11.5

Moisture Content: $\leq 0.12\%$

Magnetic Impurities: $\leq 100 \text{ ppb}$

Li/Na Content: 19 - 21% (Na)

Ni Content: N/A

Mn Content: 24 - 26%

Co Content: N/A

Transition Metals: Fe/Mn Oxide

Crystal Structure: Layered Structure

Compaction Density: $\geq 2.5 \text{ g/cm}^3$

Storage Conditions: Sealed, Dry

Conductivity: $\sim 10^{-5} \text{ S/cm}$

Voltage Range: 2.0 - 4.0 V

Purity: $\geq 99.0\%$

Primary Application: Low-cost SIB

Thermal Stability: High

Cycle Life: > 800 cycles

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