Eata Battery

Niobium Oxide (Nanostructured)

Catlog Number: BMAM-0027

Description

High-purity nanostructured niobium oxide designed for pseudocapacitive charge storage, enabling 6C-10C charge rates for next-gen fast-charging batteries.

Basic Information

Chemical Formula: Nb_2O_5

Appearance: White/Grey Powder

D50 Particle Size: 30 - 70 nm

Tap Density: ≥ 1.1 g/cm³

BET Surface Area: 15 - 35 m²/g

1st Discharge Capacity: ≥ 190 mAh/g

1st Coulombic Efficiency: ≥ 85%

Carbon Content: N/A

Active Metal Content: Nb: ~70%

Ash Content: ≤ 0.10%

Moisture Content: ≤ 0.05%

pH Value: 5.0 - 7.0

Iron (Fe) Impurity: ≤ 20 ppm

True Density: 4.6 - 4.9 g/cm³

Compaction Density: ≥ 2.5 g/cm³

Crystal Structure: Orthorhombic

Surface Coating: None

Magnetic Impurities: ≤ 30 ppb

Electronic Conductivity: ~10^{-4} S/cm

Voltage Range: 1.0 - 3.0 V

Purity: ≥ 99.5%

Primary Application: Ultra-fast charge

Thermal Stability: High

Cycle Life: ≥ 1500 cycles

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