Active Material Characteristics

Product Name: NANOMYTE® BE-400E
Product Description: Niobium Oxide electrode sheet
Formula: Nb₂O₅
Purity: > 99%
Average Particle Size (APS): 30 – 70nm

Standard Electrode Tape Characteristics

Current Collector: Copper
Current Collector Thickness: 10 µm
Sheet Size: 5 in x 10 in (12.7 cm x 25.4 cm)
Areal Capacity: 1.44 mAh/cm² ± 5%
Tape Thickness: 110 µm ± 5% (excluding current collector)

Standard Tape Composition: % | Material | Description
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81% | Niobium oxide | (active material)
6% | CMC-SBR | (water-based binder)
13%* | Carbon | (conductive carbon)

*Total Carbon in the electrode including 2% Super P, 2% carbon nanofiber, and 9% graphite nanosheet is 13%.

*Specifications can be modified upon request to accommodate different active material loadings, coating thickness, & capacity.

Electrical Characteristics

Average Voltage vs. Li/Li+: 1.6 V
Minimum Delithiation Capacity at 0.05C: 140 mAh/g
Nominal Capacity at 0.05C: ≥ 150 mAh/g

Recommended Operating Conditions

Maximum Charge Voltage: 3V vs. Li/Li+  Maximum Charge Current: 10C (6C recommended)
Maximum Discharge Voltage: 1V vs. Li/Li+  Maximum Discharge Current: 10C (6C recommended)

Available Quantities

NEI’s standard electrode sheets are available in packages of 2, 5, 10, and 20 sheets. Bulk quantities are also available.

Storage & Handling

Precautions for Safe Handling
Personal protective equipment should be used at all times. Avoid contact with eyes and skin. Ensure adequate ventilation and avoid inhalation of dusts. Wash hands thoroughly after handling.

Conditions for Safe Storage
Store in a dry and sealed pouch or under inert atmosphere, away from heat. Avoid moisture.

Refer to SDS for complete information on the safe handling of this material.

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