

NANOMYTE® BE-80E (LMFP)

Active Material Characteristics

Product Description: Lithium Manganese Iron Phosphate (LMFP) electrode sheet

Formula: $\text{LiMn}_x\text{Fe}_{(1-x)}\text{PO}_4$

Average Particle Size (D_{50}): 2 μm

Specific Surface Area: 13 m^2/g

Electrode Tape Characteristics

Current Collector: Aluminum

Current Collector Thickness: 16 μm

Sheet Size: 5 in x 10 in (127 mm x 254 mm)

Coating: Single or Double-sided sheets (as specified)

Areal Capacity: 1.25 $\text{mAh}/\text{cm}^2 \pm 5\%$ (per side)

Active Material Loading: 8.9 $\text{mg}/\text{cm}^2 \pm 5\%$ (per side)

Tape Thickness: 80 $\mu\text{m} \pm 5\%$ (excluding current collector)

Standard Tape Composition:

| Wt. % | Material | Description |
|-------|---|---------------------|
| 88 % | Lithium Manganese Iron Phosphate ["LMFP"] | (active material) |
| 8 % | Carbon Black ["Super C65"] | (conductive carbon) |
| 4 % | Poly(vinylidene fluoride) ["PVDF"] | (binder) |

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

Electrical Characteristics

Nominal voltage vs. Li/Li⁺: 3.8 V

First Charge Capacity: $\geq 150 \text{ mAh/g}$ (2.5 – 4.3V @0.05C)

Minimum Discharge Capacity: 135 mAh/g

First Discharge Capacity: $\geq 140 \text{ mAh/g}$ (2.5 – 4.3V @0.05C)

Recommended Operating Conditions

Maximum Charge Voltage: 4.3 V vs. Li/Li⁺

Cutoff Voltage for Discharge: 2.5 V vs. Li/Li⁺

Maximum Charge Current: 0.5 C ($\geq 50\%$ capacity)

Maximum Discharge Current: 0.5 C ($\geq 50\%$ capacity)

Available Quantities

NEI's standard electrode sheets are available in packages of 2, 5, 10, 25, 50, & 100 sheets. Bulk quantities also available.

Precautions for Safe Storage & 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. Store in a dry and sealed pouch or under inert atmosphere, away from heat. Avoid moisture. [Refer to SDS for complete safety information of this material.](#)

This product should not be used in any commercial battery.

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