

NANOMYTE® BE-100E (10% Silicon-Graphite)

Active Material Characteristics

Product ID: BE-100E (single-sided) | BE-100E-DS (double-sided)
Product Description: 10% Silicon-Graphite composite electrode sheet
Average Particle Size (D₅₀): ~ 17 μm

Electrode Tape Characteristics

Current Collector: Copper (10 μm thick)
Sheet Dimensions: 5 in x 10 in (127 mm x 254 mm); coated edge-to-edge
Calendered: Yes
Electrode Coating: Single or Double-sided sheets (as specified)
Coating Thickness: 76 μm ± 5% (excluding current collector)
Areal Capacity: 4.0 mAh/cm² ± 5% (per side)
Active Material Loading: 0.77 mg/cm² ± 5% (Silicon only)

Standard Tape Composition:	Weight %	Material	Description
	10.0%	Silicon	(active material)
	77.5%	Graphite	(active material)
	7.0%	SBR-PAA-CMC	(water-based binder)
	5.5%	MWCNT-Carbon Black mixture	(conductive carbon)

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

Electrochemical Characteristics

Average Voltage vs. Li/Li+: 0.1 V
Minimum Delithiation Capacity: 520 mAh/g (0.05 – 1V @ 0.05C)
Nominal Capacity: ≥ 540 mAh/g (0.05 – 1V @ 0.05C)

Available Quantities

Electrode sheets are available in packs of 2, 5, 10, 25, 50, & 100 sheets. Bulk quantities available upon request.

Precautions for Safe Handling & Storage

Handling: Appropriate personal protective equipment should be used at all times. Avoid creasing and folding, or actions that abrade, sand, or grind the coated surface, as this can cause the brittle Silicon-Graphite coating to delaminate or flake off, creating unnecessary dust. Handle in a well-ventilated area if dust is created.

Storage: Store sheets flat and in a cool, dry place, away from heat and moisture. Exposure to moisture or humidity can degrade electrochemical performance.

Warning: Hazardous constituents, including Silicon, are bound within a solid polymer matrix and are not bio-available or flammable in the as-shipped form. Processing that generates dust or exposure to extreme temperatures may release combustible or hazardous particles. Follow appropriate dust-control measures during downstream processing.

Refer to SDS for complete safety information of this material.

This product should not be used in any commercial battery.

DISCLAIMER: NEI Corporation believes this information accurately describes the product's typical characteristics. NEI disclaims liability for any incidental or consequential damages resulting from use beyond its control. This data is a supplement to the user's own investigations; it is the user's responsibility to independently determine the product's suitability, performance, and safety for their specific application. Nothing herein constitutes a recommendation to infringe upon any patent or intellectual property right.