

HARD CARBON



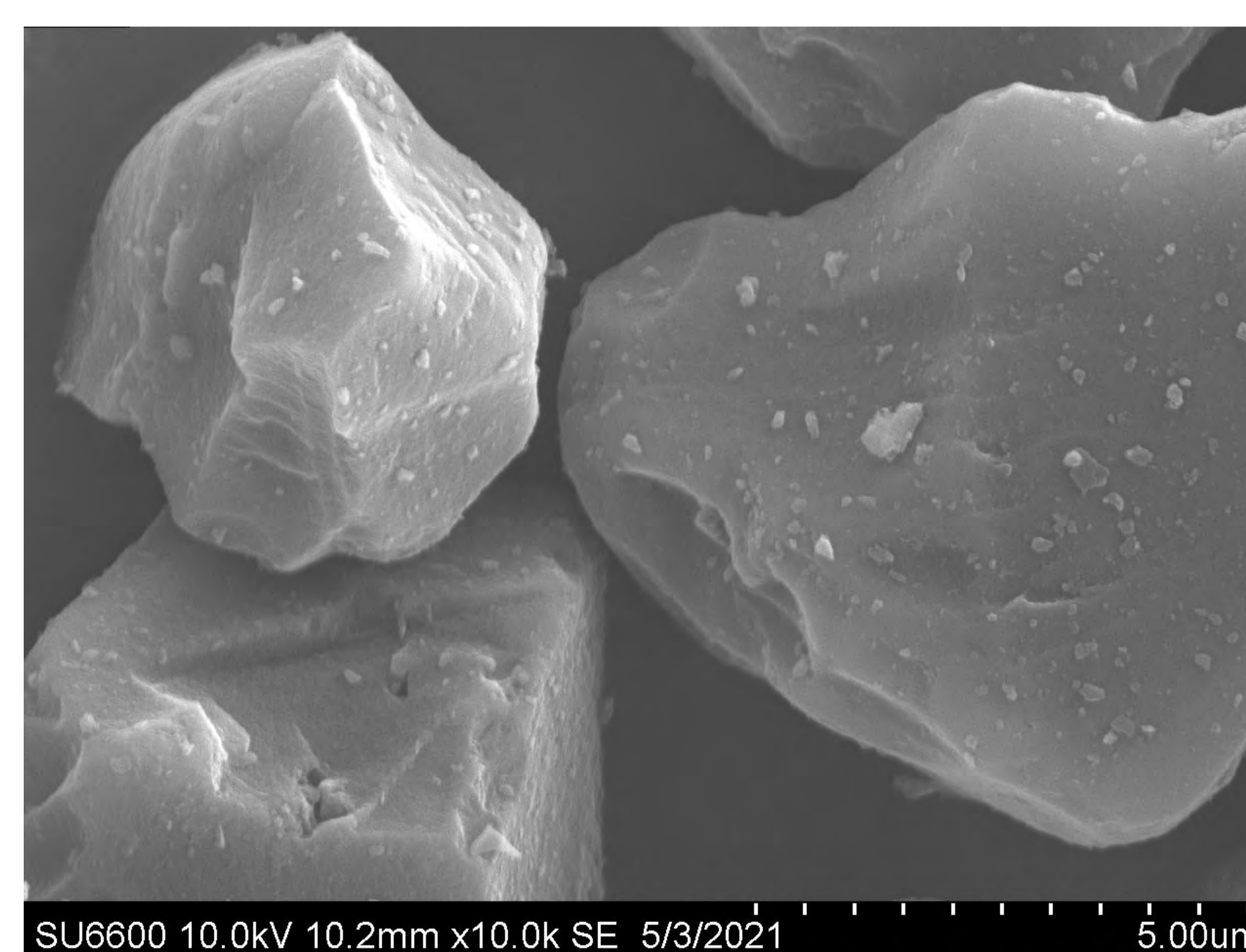
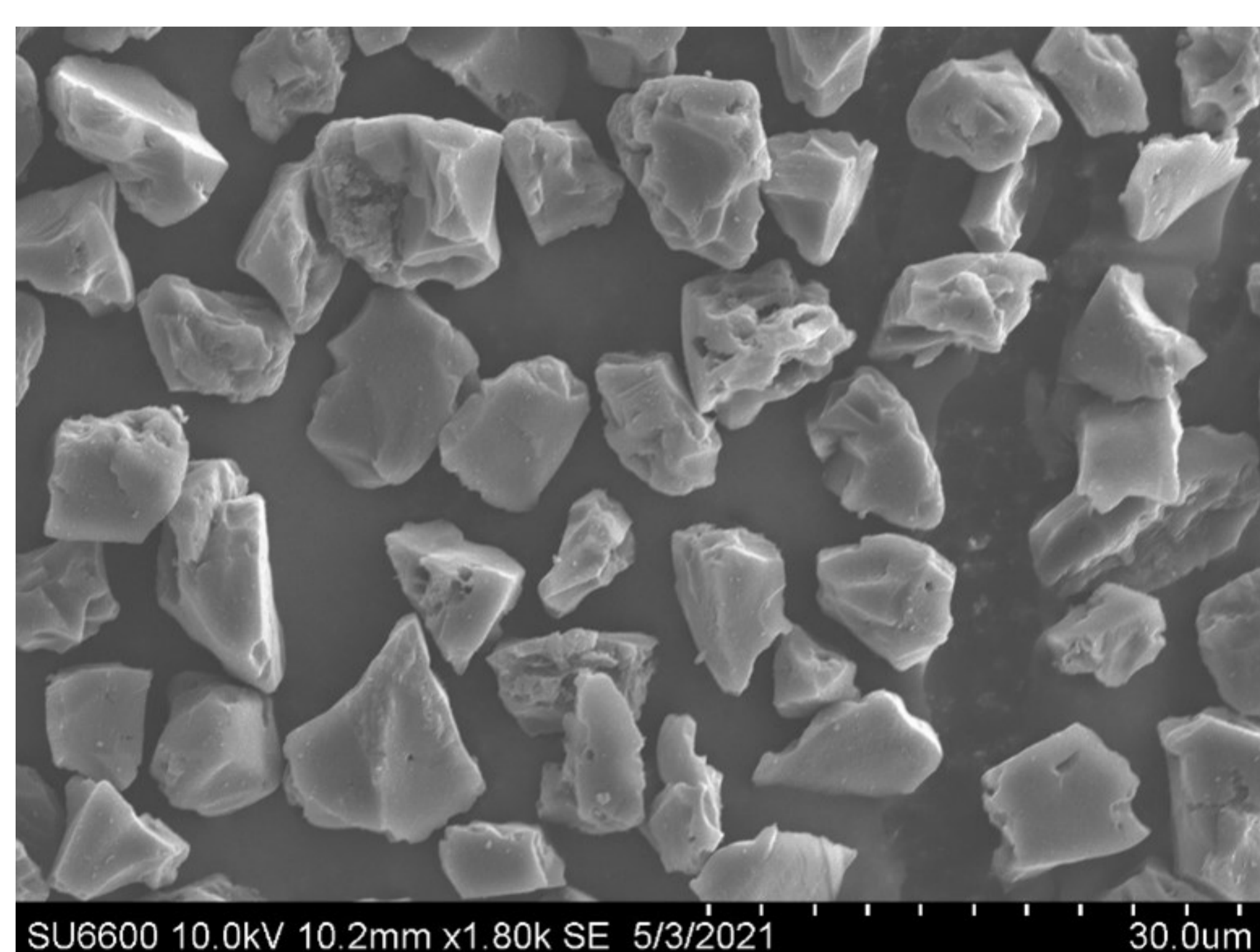
“ HCH 102 for Sodium-ion battery anodes ”

The demand for energy storage solutions that are both effective and environmentally responsible is at an all-time high. Haycarb has embraced this imperative by innovating our top-tier Haycarb Hard Carbon, designed for incorporation into Sodium ion and Lithium ion batteries as well as supercapacitors. Crafted from coconut shell charcoal and refined through our unique technology, our Hard Carbon is distinguished by its exceptional energy density, prolonged cycle life, and superior power capabilities.

Our hard carbon is designed for optimal performance in sodium-ion and lithium-ion battery applications. It is derived from coconut shell charcoal and improved through our proprietary technology. It demonstrates exceptional energy density, enduring cycle life, and higher power performance.

TECHNICAL INFORMATION

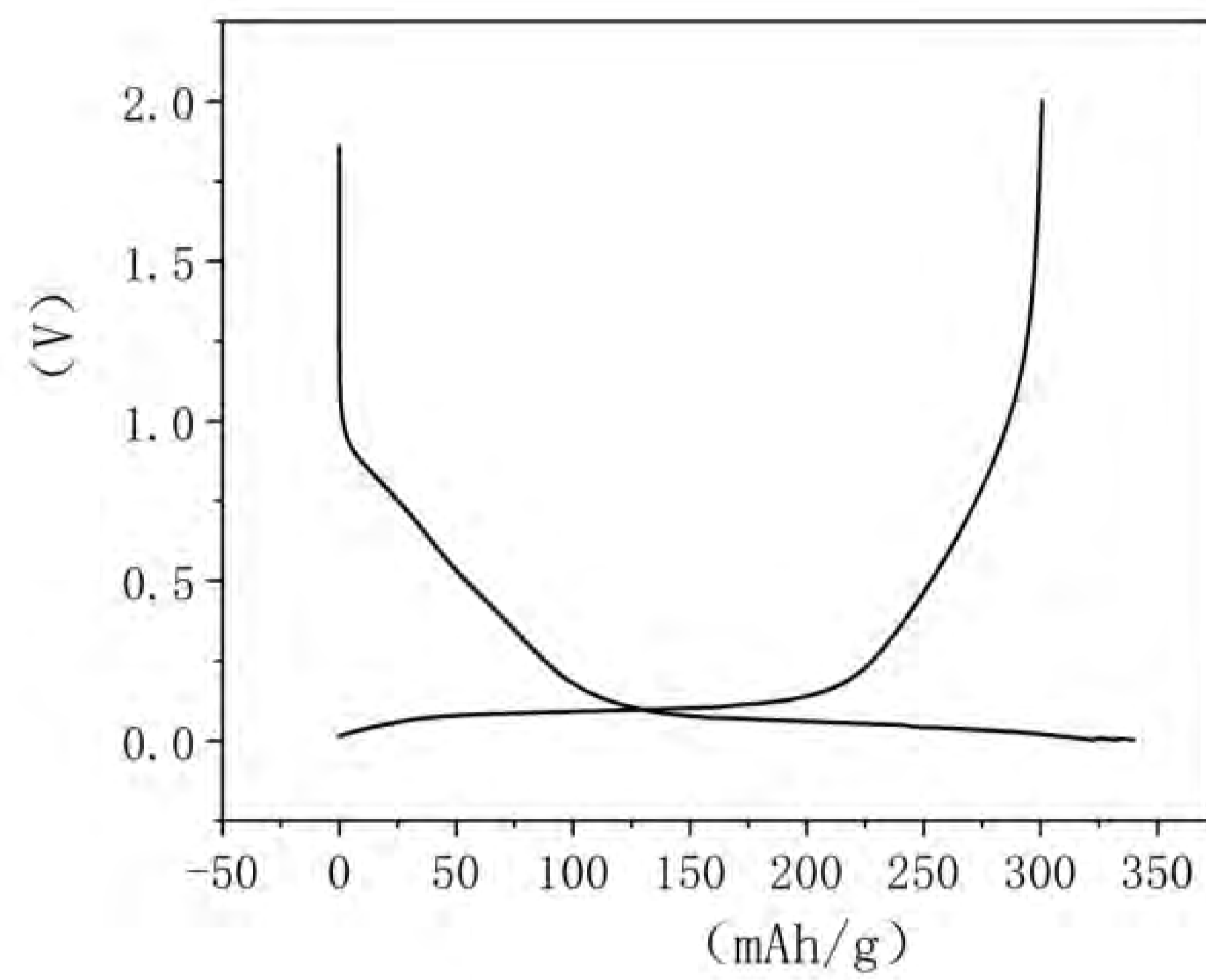
Parameter	Specification	Test Method
Moisture %	Max 1	ASTM
Bulk Density (g/cm ³)	Min 0.85	Tapping method
Ash (%)	Max 0.2	ASTM
pH	5-8	ASTM
Surface Area (BET-M) (m ² /g)	<5	BET - Nitrogen
Interlayer spacing: D002 (nm)	Min 0.38	XRD
True Density (g/cc)	2	True Density Analyzer
Average Particle Size (D50) (µm)	7-9 (or 5-7)	Laser



ELECTROCHEMICAL PERFORMANCE (HALF CELL)

Reversible Capacity (mAh/g)	ICE%
300	88 - 90

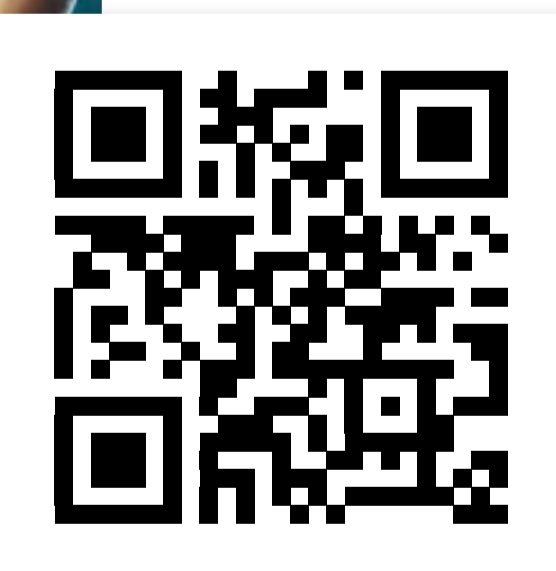
Cyclic Efficiency	Cycle 1	Cycle ~1000	Cycle ~2500
Capacity	100%	96%	85%



PACKAGING: Standard packaging is primarily designed to prevent the deterioration of accurately graded granules and to prevent the adsorption of moisture or atmospheric contaminants. Other packaging criteria can be accommodated upon request.

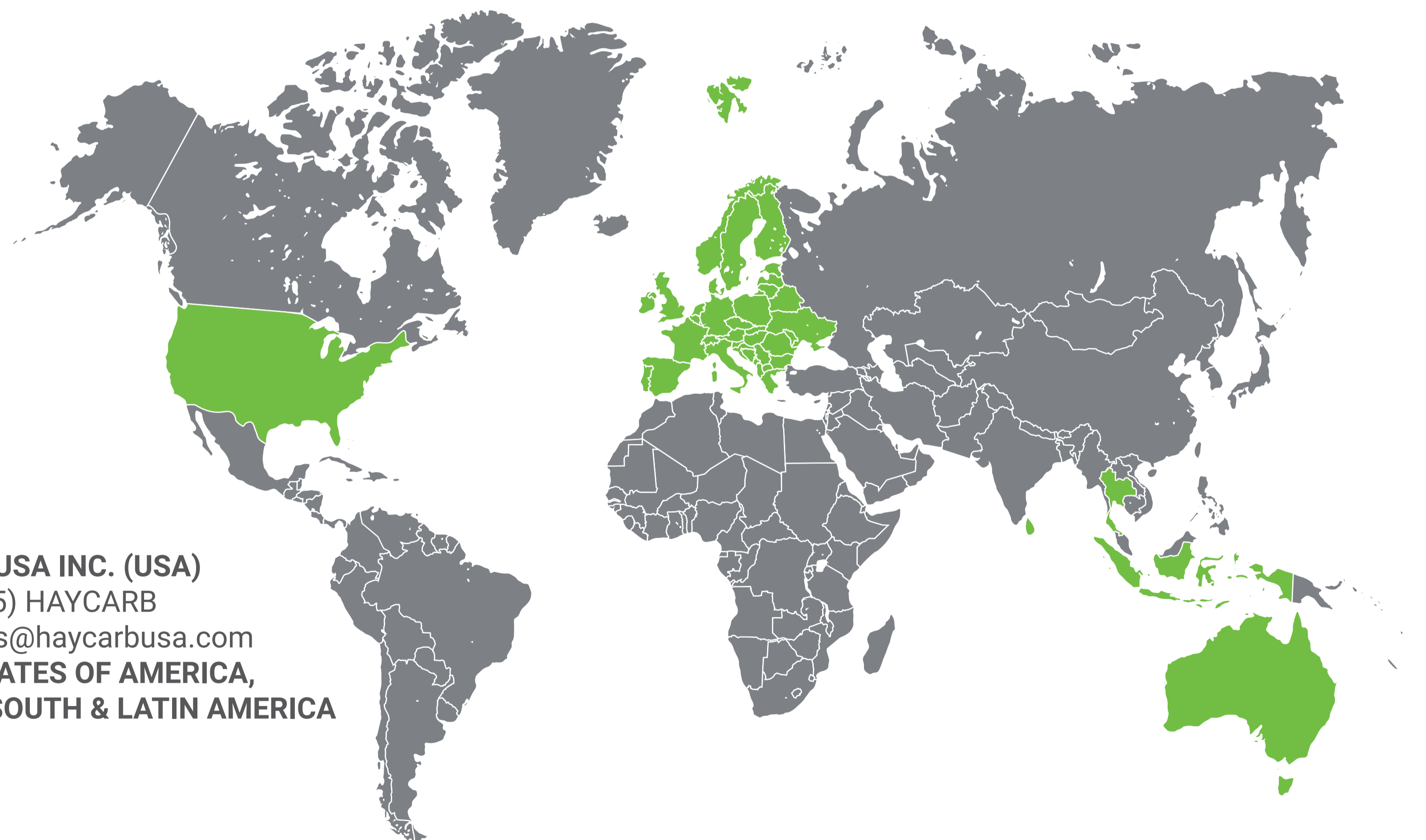
BULK BAG
Net. 500 kg

SACKS
Net. 20 kg



'ACTIVATE' Haycarb's ESG roadmap 2030

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