

High Purity Conductive Graphite Powder For Advanced Battery Electrodes And Energy Storage

Item Number: CL31



Introduction

High purity conductive graphite powder engineered for premium battery electrodes, supercapacitors, and energy storage systems, offering exceptional 99.98% carbon content, ultra-low ash residue, neutral pH, and tightly distributed 1 to 5 micron particle sizing for rigorous research workflows.

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Application	Description	Key Benefit
Lithium-Ion Battery Cathodes	Serves as an efficient conductive additive blended with LFP, NMC, LCO, or NCA active materials in slurry processing.	Drastically reduces internal cell resistance (DCR), enhances rate capability, and prevents electrode polarization during high C-rate discharge.
Silicon-Graphite Composite Anodes	Incorporated into high-capacity silicon-dominant or silicon-carbon composite negative electrodes.	Maintains continuous electrical contact pathways during the large volumetric expansion and contraction cycles of silicon particles.
Solid-State Battery Electrolyte Interfaces	Formulated into interlayers and composite electrode-electrolyte frameworks for all-solid-state battery cells.	Alleviates interface contact impedance and provides compliant electronic pathways across rigid solid electrolyte interfaces.
Supercapacitor Electrode Formulations	Blended with high-surface-area activated carbons to form high-power density electric double-layer capacitor (EDLC) electrodes.	Imparts rapid electron transport through thick electrode layers, maximizing frequency response and ultra-fast charge/discharge efficiency.
Conductive Inks & Printable Electronics	Compounded into liquid inks and conductive pastes for screen printing, flexographic deposition, and flexible sensor circuits.	Ensures stable sheet resistance, excellent line resolution, and strong adhesion to flexible polymer and metal substrates without corrosion.
Thermal Management & Conductive Polymers	Compounded into engineered thermoplastics, epoxy resins, and thermal interface materials (TIMs).	Imparts both electrical antistatic properties and enhanced directional thermal dissipation pathways in sensitive electronic assemblies.
Electrochemical Sensor Substrates	Applied as the primary conductive foundation or modified modifier layer on working electrodes for analytical detection.	Provides a low background noise signal, a wide electrochemical working potential window, and reproducible electron transfer kinetics.

Parameter	Reference Standard / Value
Product Identifier	CL31
Carbon Content (C)	≥ 99.98 %
Particle Size Distribution (D50 Range)	1 ~ 5 μm
Moisture Content (H₂O)	≤ 0.08 %
Ash Content	≤ 0.01 %
pH Value	7 (Neutral)
Iron Content (Fe)	≤ 5 ppm
Sulfur Content (S)	≤ 0.01 %
Silicon Content (Si)	≤ 1 ppm
Chlorine Content (Cl)	≤ 0.1 ppm

Parameter	Reference Standard / Value
Fluorine Content (F)	≤ 1 ppm
Aluminum Content (Al)	≤ 1 ppm
Copper Content (Cu)	≤ 1 ppm
Chromium Content (Cr)	≤ 1 ppm
Standard Packaging	100 g / sealed bag