Technical Data Sheet

Carbon Black Nanoparticles

Description

Carbon Black nanoparticles are ultra-fine, high-surface-area carbon particles produced via controlled thermal or chemical processes. These nanoparticles offer excellent conductivity, UV absorption, and reinforcing properties. CB NPs are widely used in polymer composites, inks, coatings, batteries, and conductive applications.

Properties

- Appearance: Black powder
- Average Particle Size: 10-50 nm
- Purity: >99%
- Density: ~0.5 g/cm³
- Morphology: Spherical
- Crystal Structure: Amorphous
- Specific Surface Area (BET): 100–300 m²/g
- Packaging: 1kg / 5kg / 25kg

Applications

- Polymer Composites: Reinforcement and electrical conductivity
- Conductive Inks & Coatings: EMI shielding and antistatic applications
- Batteries & Supercapacitors: Electrode material for high-performance energy storage
- Rubber & Elastomers: Tire reinforcement and wear resistance
- UV Protection: Additive in paints, plastics, and coatings

Features

- High surface area for superior interaction with matrices
- Excellent electrical conductivity
- Good thermal stability
- Homogeneous particle size distribution
- Reinforcing agent in polymer composites

Notes

- The product should be stored in the original container securely under cool and dry conditions away from direct sunlight, heat and contamination.
- Shelf life at proper storage is about 24 months from the production date, but it is recommended to consume the product within 12 months.