Quanto nano

Working on the smallest things
with the biggest impact

GRAPHITE NANOPOWDER

Nano Graphite Powder is a cutting-edge material that consists of ultra-fine particles, with dimensions measured in nanometers. The exceptional properties of this nanopowder are attributed to its high surface area to volume ratio, distinguishing it from its bulk graphite counterpart. This novel material exhibits unique physical and chemical characteristics, making it beneficial for a wide spectrum of industrial applications. These key applications encompass:
Energy Storage / Polymer Composites / Lubricants / Catalysis / Sensors, etc.

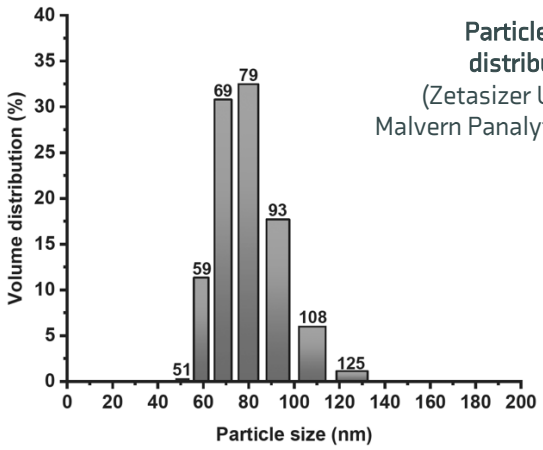
EXTENSIVE CHARACTERISATION DATA

To ensure uncompromised product quality, each particle batch is analysed and characterized using the latest quality control techniques including dynamic light scattering (DLS), Scanning Electron Microscopy (SEM), transmission electron microscopy (TEM) and Brunauer-Emmett-Teller (BET) analysis. A specific quality control certificate will accommodate every batch. Additional customer-specific characterization requirements can be agreed upon.

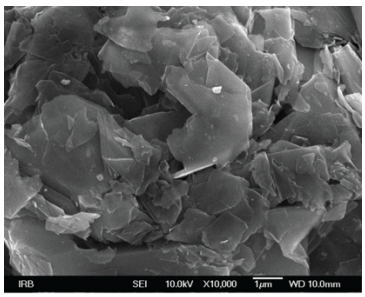
The below is just an example of many different types of **Nano Graphite Powder** and materials we can produce for our customers, also much below that size.

MATERIAL CHARACTERISTICS

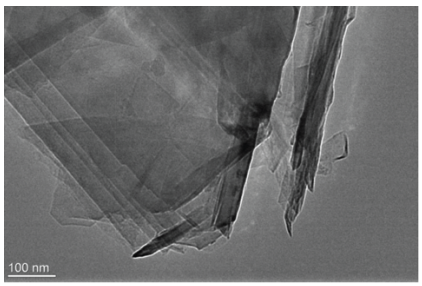
Chemical name	Graphite
Formula	C
Molecular weight	12.01 g mol^{-1}
Physical state	Solid
Appearance (Form)	Powder
Appearance (Color)	Dark grey to black
Purity	99%
Particle size	~79 nm
Pore size (BET)	4 nm
Surface area (BET)	11 $m^2 g^{-1}$
Zeta potential	-26.3 mV
Conductivity/Resistance	21.6 S m^{-1}
Polydispersity index (PI)	0.5
pH	6.8



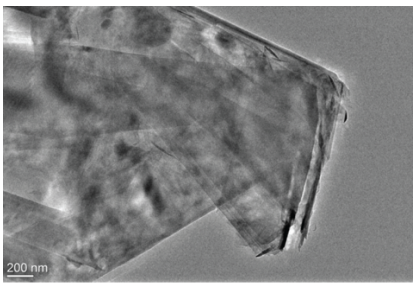
Particle size distribution
(Zetasizer Ultra, Malvern Panalytical)



SEM image (FE SEM, JSM 7000F)



TEM image (JEOL JEM 2010F)



TEM image (JEOL JEM 2010F)

APPLICATIONS

- Nuclear generation industry
- Fuel cell biosensors
- Composites
- Supercapacitor technology
- Engineering material
- for a variety of applications (piston rings, bearings, veins etc.)
- Electrode designing / Battery Industry
- Refractory materials
- Lubricating agents

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