NanoXplore

Performance Through Carbon Chemistry

Technical Data Sheet

GRAPHENEBLACK™ 3X
A Product of NanoXplore

GrapheneBlack™ 3X

A versatile and low-cost graphene powder available in industrial volumes.

GrapheneBlack™ 3X is a multifunctional carbon additive formulated for across-the-board performance improvements in thermoplastics, thermosets, inks, coatings, and rubbers. It provides a unique opportunity to enable manufacturers to reach the next level of long term performance and cost reduction with virgin and recycled resins. Performance improvements include:

Mechanical Properties | Electrical Conductivity & Shielding | Thermal Properties | Oxidation Resistance | UV Protection | Barrier Properties

Physical and chemical properties

Physical properties

Property	Value
Primary particle size*	predominantly 1–2 µm
Agglomerate size**	D10 < 10 µm D50 < 30 µm D90 < 70 µm
Number of layers***	6 –10
Bulk density	0.2-0.3 g/cm^3
Appearance	Black fluffy powder
Solubility	Insoluble
Moisture (TGA)	< 0.5 wt%
Ash content (TGA)	< 4 wt%

* Average primary particle size measured by statistical TEM analysis.
** Loose agglomerate size measured by laser diffraction.
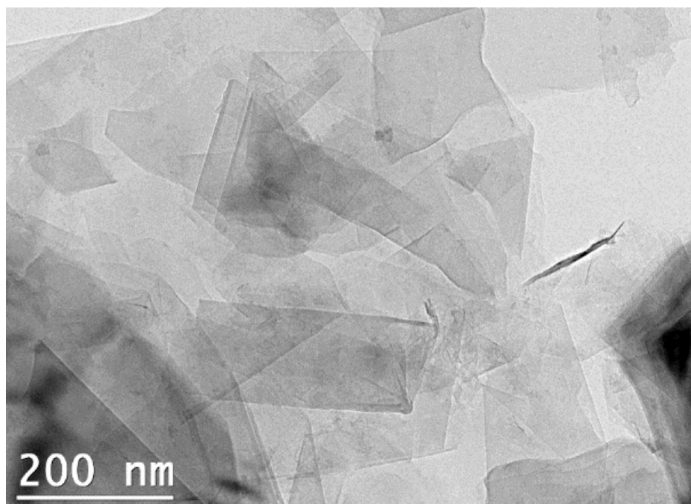**** Up to 90% of flakes within this range.*

Technical Data Sheet

Chemical composition

Element	Value
Carbon	> 96 wt%
Oxygen	< 1 wt%

Elemental content measured by CHNOS.

Electron microscopy

Few-layer GrapheneBlack™ 3X flakes under TEM.

200 nm

Electron micrograph (TEM) shows various few-layer thick flakes with thicknesses mainly ranging from 6 to 10 layers.

Technical Data Sheet

GrapheneBlack 3X is available in:
400kg big bag.

4500 Boul. Thimens, Montreal, QC H4R 2P2

(+1) 514-935-1377

info@nanoxplore.ca