



Performance Through Carbon Chemistry

## Technical Data Sheet



**GRAPHENEBLACK™**  
A Product of NanoXPlore

0X

# GrapheneBlack™ 0X

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

GrapheneBlack™ 0X is a multifunctional carbon additive formulated for across-the-board performance improvements in thermoplastics and rubbers and is particularly well suited for use in thermosets, inks, paints and coatings. 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 0.5 – 1 µm
Agglomerate size**	D10 = 4 µm D50 = 12 µm D90 = 27 µm
Number of layers***	6 –10
Bulk density	0.2-0.3 g/cm <sup>3</sup>
Appearance	Black fluffy powder
Solubility	Insoluble
Moisture (TGA)	< 0.5 wt%
Ash content (TGA)	< 3 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.

#### Chemical composition

Element	Value
Carbon	>97 wt%
Oxygen	< 1 wt%

Elemental content measured by CHNOS.

## Electron microscopy

Few-layer GrapheneBlack™ 0X flakes under TEM.



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

GrapheneBlack 0X is available in:  
500kg big bag.

4500 Boul. Thimens, Montreal, QC H4R 2P2

(+1) 514-935-1377

info@nanoxplore.ca

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