NanoXplore

Performance Through Carbon Chemistry

Technical Data Sheet

GRAPHENE BLACK™ 0X

DS-GB0X-190312

Technical Data Sheet

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:

Physical and chemical properties

Physical properties

Property	Value
Primary particle size*	0.5 – 1 µm
Agglomerate size**	D50 = 13 µm
Number of layers***	6 –10
Bulk density	0.14 g/cm3
Appearance	Black fluffy powder
Odor	Odorless
Solubility	Insoluble
Moisture (TGA)	<0.6 wt%
Ash content (TGA)	2.85 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.*

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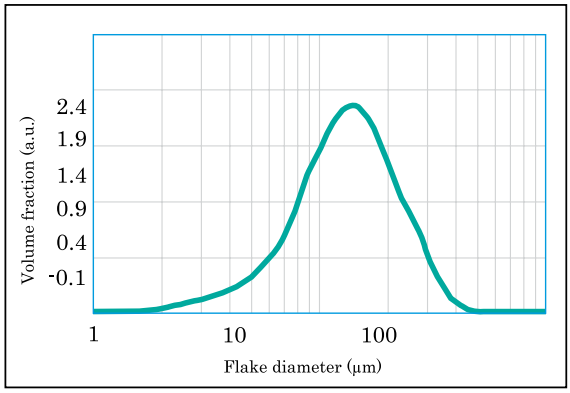
Chemical composition

Element	Value
Carbon	>95 at.%
Oxygen	3.5 at.%
Sulfur	0.25 at.%
Metal impurities	<1 at.%

Elemental content derived from X-Ray Photoelectron Spectroscopy (XPS) and the Energy Dispersive X-ray spectroscopy (EDS) analysis.

Agglomerate size distribution



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: **1 kg, 30 kg, 300 kg** containers.

Contact us for larger package sizes.

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