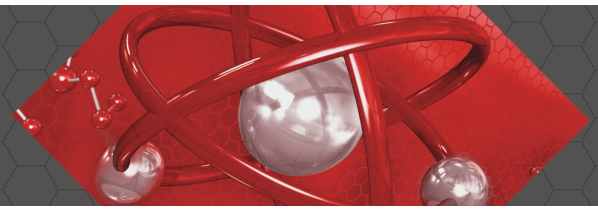


Technical Data Sheet

xGnP® Graphene Nanoplatelets - Grade M

xGnP® Graphene Nanoplatelets are unique nanoparticles consisting of short stacks of graphene sheets having a platelet shape. Each grade contains particles with a similar average thickness and surface area.

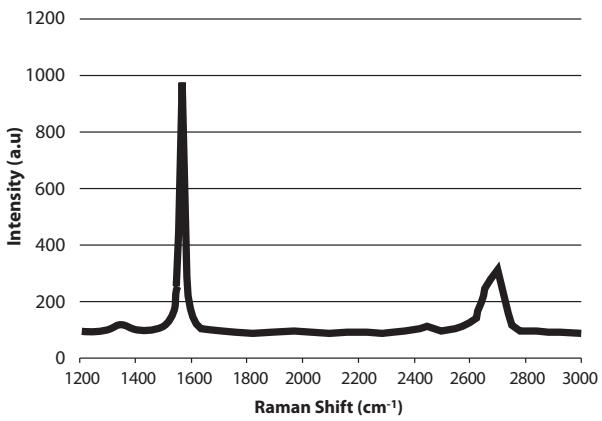
Grade M particles have an average thickness of approximately ***6 - 8 nanometers*** and a typical surface area of ***120 to 150 m^2/g***. Grade M is available with average particle diameters of ***5***, ***15*** or ***25*** microns.

Characteristics of Bulk Powder

Property	*Typical Value*
Appearance	Black granules
Bulk Density	0.03 to 0.1 g/cc
Oxygen Content*	< 1 percent
Residual Acid Content*	< 0.5 wt%

**Note: nanoplatelets have naturally occurring functional groups like ethers, carboxyls, or hydroxyls that can react with atmospheric humidity to form acids or other compounds.*

Raman Spectroscopy of xGnP® Graphene Nanoplatelets



Typical Properties of xGnP® Graphene Nanoplatelets

Property	*Typical Value - Parallel to Surface*	*Typical Value - Perpendicular to Surface*	*Unit of Measure*
Density	2.2	2.2	grams/cc
Carbon Content	>99.5	>99.5	percent
Thermal Conductivity	3,000	6	watts/meter-K
Thermal Expansion (CTE)	4 -6 x 10^{-6}	0.5 – 1.0 x 10^{-6}	m/m/deg.-K
Tensile Modulus	1,000	na	GPa
Tensile Strength	5	na	GPa
Electrical Conductivity	10^7	10^2	siemens/meter

XG sciences
THE MATERIAL DIFFERENCE