XG sciences
THE MATERIAL DIFFERENCE

XG LEAF™

TECHNICAL DATA SHEET

Product Overview

With today's increased demands for advanced materials to optimize thermal conductivity, thermal spreading, electrical properties, and corrosion resistance, companies are discovering that **XG Leaf™** is a more effective solution than aluminum and copper foils for a wide variety of applications.

XG Leaf™ is a thin, flexible and lightweight sheet product built on a foundation of XG Sciences' **xGnP® graphene nanoplatelets**. By precisely tailoring the composition, density, and our proprietary manufacturing process, we create materials with unique properties to optimize thermal and electrical conductivity for our customers' specific needs. Different types of **XG Leaf™** graphene paper offer outstanding thermal and electrical properties:

- ***Thermal Conductivity and Spreading*** - Formulations are available with in-plane conductivity above 500 W/M°K
- ***Electrical Properties*** - Formulations are available with surface resistivity ranging as low as 0.04 Ω/sq

Potential applications include:

- Thermal management and heat spreading
- EMI Shielding
- Electrodes for batteries and supercapacitors
- Conductive substrate for bio-sensors
- Resistance heating
- High-barrier packaging
- Reinforcement for composites
- Water treatment

Engineered Solutions
Coated
Laminated
Die cut

Packaging Options
Boxed in sheet form (200 sheets | 360 cm²)
On carrier film in rolls
Coated and laminated

Please contact us to discuss how XG Sciences can work with you to create custom formulations for your applications.

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XG LEAF™- B Product Characteristics

Thermal management and heat spreading, EMI shielding, electrical conductivity

	B-070	B-071	B-072
Structure	Single Layer		
Thickness (µm)	30	50	75
Sheet Size (cm)	60 x 60 (0.36 m^2)		
Density (g/cm^3)	1.8		
Tensile Strength (MPa)	10		
Thermal Conductivity In-Plane • Through Plane (W/mK)	500 • 3		
Specific Heat @ 25°C (J/g^0K)	0.71		
Electrical Conductivity In-Plane (S/cm)	3800	3700	3300
Electrical Resistivity Surface (Ω/sq) • Sheet (µΩ-m)	0.1 • 2.6	0.06 • 2.7	0.04 • 3.0
EMI Shielding dB @30 MHz • dB @1.5 GHz	51 • 53	53 • 58	56 • 64
Max. Operating Temperature (°C)	450		
RoHS Compliant	Yes		

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