NEOGRAF™ SOLUTIONS

Graf-X™ | Graf+®

Graf-X™ Graphene Nanoplatelets and Graf+® Micronized Graphite Powders for Coatings Applications

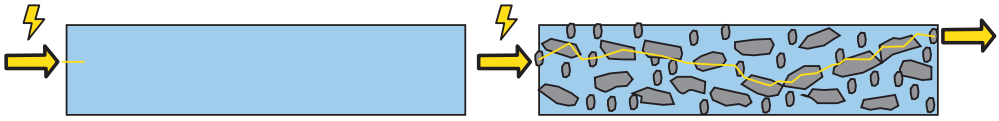


Product Overview

Graf-X™ graphene nanoplatelets and Graf+® micronized graphite powders are innovative additives designed to enhance the electrical and thermal conductivity of polymeric systems. These products can be incorporated into various coating applications, transforming traditionally non-conductive materials into electrostatic dissipating or even conducting surfaces.

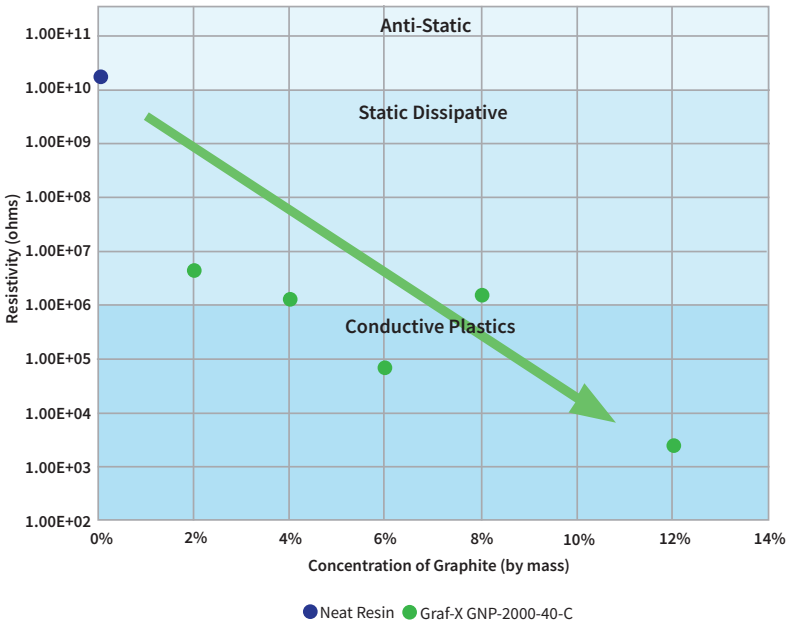
The illustration below demonstrates the difference between a neat polymer (left) and a polymer filled with a combination for Graf-X nanoplatelets and a Graf+ powder (right). The path of electrons percolating through the polymer is demonstrated in yellow.

Visualization of the Percolation of Electrons Through a Polymer



The chart below represents the measured resistance in an epoxy system at different loading levels of Graf-X GNP-2000-40-C. The trend line shows the decrease in resistivity. The colored background shows the typically identified resistance levels for the described properties from anti-static to static dissipative to conductive plastics.

Loading Levels of Graf-X GNP-2000-40-C vs. Resistivity



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Key Features of Graf-X™ Graphene Nanoplatelets and Graf+® Micronized Graphite Powders

- **Enhanced Conductivity:** Achieves electrical and thermal conductivity in typically insulating polymers
- **Low Percolation Threshold:** Small additions can significantly alter material properties
- **Barrier Property Improvement:** Reduced water absorption and gas permeation
- **Versatile Application:** Compatible with a wide range of polymeric systems
- **Substrate Protection:** Provides additional durability and chemical resistance
- **Cost-Effective:** Enables substitution of costly substrates with more economical solutions

Applications

- Roofing and Sheeting
- Commercial Interiors - carpet backing, ceilings, wall coverings, and wall joints
- Automotive and Electronics
- Paints
- Adhesives
- Thermoplastics
- Graf-X™ and Graf+® products can be incorporated into numerous coating polymers, including:

  EPOXY | SILICONE | ACRYLATES | PVC | VINYL ESTERS | ELASTOMERS
  WAXES AND GREASES | POLYURETHANES | STYRENICS | BITUMEN
  CELLULOSE DERIVATIVES| THERMOPLASTICS (ABS, PE, PP) | RUBBER COMPOUNDS (EPDM, SBR, NATURAL RUBBER)

Benefits

- **Light Weighting:** Achieves desired properties with less material
- **Improved Durability:** Enhances resistance to wear and environmental factors
- **Chemical Resistance:** Protects substrates from corrosive elements
- **Expanded Functionality:** Enables new applications for traditionally non-conductive materials
- **Cost Savings:** Substitutes expensive conductive materials with more affordable options
- **EMI Absorption:** More absorption than carbon black

Commitment to Excellence

Graf-X™ and Graf+® products are produced in North America and meet or exceed all environmental and quality standards in a sustainable manner.

✓ISO 9001:2015 ✓RoHS Compliant
✓ISO 14001:2015 ✓Conflict-Free Minerals

Technical Support

NeoGraf's team of Application Engineers specializes in providing technical support for a wide variety of applications. With over 140 years of carbon and graphite innovation and leadership, we offer expertise in development and manufacturing of high quality graphite-based products. Contact NeoGraf Solutions today for technical answers and support at any stage of your product design.

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