



**UNIVERSAL  
MATTER**  
ADVANCED MATERIALS

## USING CARBON TO DECARBONIZE

# PAINTS & COATINGS

### This Changes Everything...

Universal Matter upcycles carbon into graphene and related advanced materials to boost the performance and sustainability of your innovations.

### Flash Joule Heating Process

Our process delivers high quality, economical graphene and related advanced materials from simple carbon feedstocks enabling optimized solutions that enhances performance and reduces your carbon footprint.



**High Quality:** Few layer, defect free



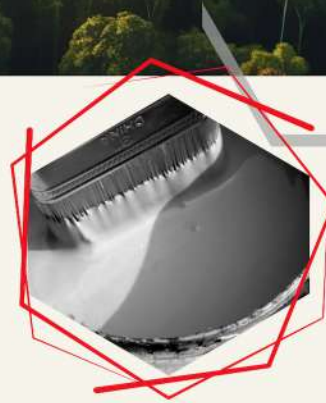
**New Morphologies:** Polyhedral Graphene



**More Economical:** High volume, efficient process



**Highly Sustainable:** Energy Efficient, using waste, upcycle and recycled carbon



We understand the challenges faced by coatings formulators. Our unique **Genable™** additives offer value adding performance and sustainability benefits.

### Barrier Improvement

- Anti-corrosion
- Chemical resistance
- Water barrier
- Gas permeability

### Mechanical Properties

- Abrasion resistance
- Tensile strength
- Impact resistance

### Conductivity Applications

- Electrical conductivity
- Anti-static dissipation
- Thermal conductivity

### Electromagnetic Spectrum

- UV protection
- EMI shielding



## Genable™ GRAPHENE DISPERSIONS

- ✓ Outstanding compatibility and in-can stability
- ✓ Easy to formulate and safe to incorporate
- ✓ Optimised properties designed for performance

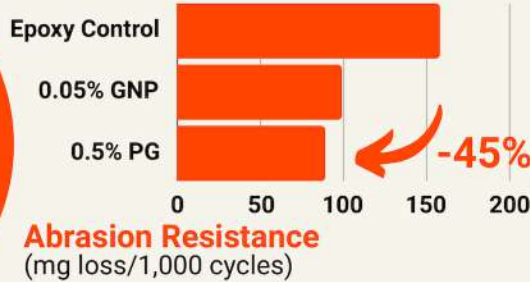
✓ **UNLOCKING THE POTENTIAL OF GRAPHENE**

# We are Reinforcing your Innovations...



## Outstanding Barrier Performance

Addition of graphene increases the tortuous path through the coating offering outstanding **anti corrosion** and **chemical resistance protection**.



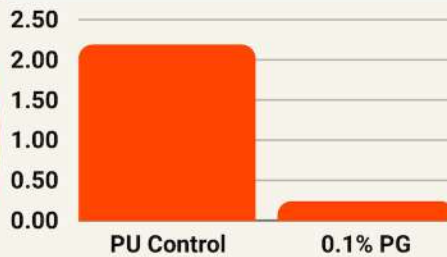
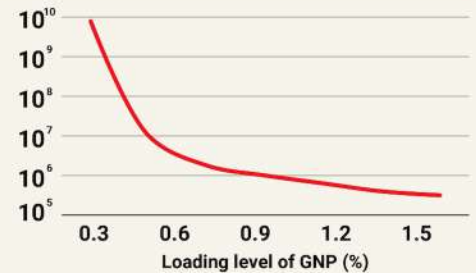
## Mechanical Uplifts

Adding a reinforcing structure to your coating with the potential to improve **impact resistance**, **tensile strength**, **elongation**, **abrasion** and **erosion** resistance.



## Conductivity

Whether you are looking for **electrically conductive**, **anti-static dissipative** or **thermal conductivity coatings**, graphene has the potential to be the key to your innovation success.



UV Resistance - Delta E\* (after 500hrs exposure)

Sheet Resistivity (Ω.cm)

## UV and EMI Shielding

Graphene absorbs and dissipates **UV radiation**, mitigating the effects of exposure such as color degradation. Also graphene has the potential to enhance **electromagnetic shielding**, protecting devices from interferences.

## Global Player with a Local Presence

UM has a network of production and innovation centers, and increasing global coverage of distribution partners. This enables us to offer consistent supply of high quality products and offer the technical support our customers deserve.



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Red pin: UM Production/Technical Centre  
Green pin: Distribution Partner