



# Ultra Elite EMI Armour Paint

## Graphene Powered Silver-Coated Copper Paint for EMI/RFI Shielding and Heat Management

### Product Overview

Nanotech Ultra Elite EMI Armour Paint is a one-part, aqueous conductive polyester paint based on Nanotech Premium Graphene Technology and silver-coated copper flakes, designed to attenuate electromagnetic interference (EMI) or radio frequency interference (RFI) and dissipate heat for heat management.

These features are critical for the modern technology, in which heat sinks utilize conduction and convection for heat dissipation in order to avoid thermal shutdown. The coating is also highly corrosion proof and scratch resistant, due to the excellent chemical stability and physical strength of our proprietary graphene technology.

This paint is ready to spray, roll or brush and requires no heat treatment, safe for heat sensitive substrates. It adheres strongly to plastic, metal, glass and textile substrates and mild solvent-based formulation makes it applicable for plastic prone to solvent dissolution, such as polystyrene and polyethylene.

Item # 905138	
Product Specifications*	
<b>Conductive Filler</b>	Proprietary Graphene-metal Mix
<b>Form</b>	Liquid
<b>Solvent</b>	Water (and less than 5% organic solvent)
<b>Color</b>	Copper Red
<b>Viscosity</b>	430-500 cP (25°C)
<b>VOC contents</b>	5.1 %
<b>Density</b>	1.25 ± 0.05 kg/L
<b>Solid content (by weight)</b>	51-53 %
<b>Thinner</b>	Water
<b>Recoat/Respray time</b>	10-15 min
<b>Cure time</b>	20 h @ 25°C
<b>Recommended coating thickness</b>	30-50 µm (dry)** 50-100 µm (wet)
<b>EMI Shielding Effectiveness</b>	~80 dB at 10 kHz -10 MHz, 95 dB at 90 MHz, 72 dB at 1 GHz, 65 dB at 5 GHz , 90 dB at 40 GHz (at 30 µm dry thickness)
<b>Electric conductivity</b>	2400-2600 S/m (dry film)
<b>Thermal conductivity</b>	4.1 ± 0.0205 W/(m•K) (dry film)
<b>Theoretical coverage</b>	5 mL/square foot for 30 µm dry thickness 10 mL/square foot for 50 µm dry thickness (not including paint lost to containers and spraying gun)

\* All numbers listed in this sheet have been confirmed by third party testing.

\*\* 30 µm dry thickness provides sufficient shielding effectiveness but requires higher levels of paint applications skills to ensure complete coverage of the substrate. 50 µm dry thickness is recommended for average consumers.

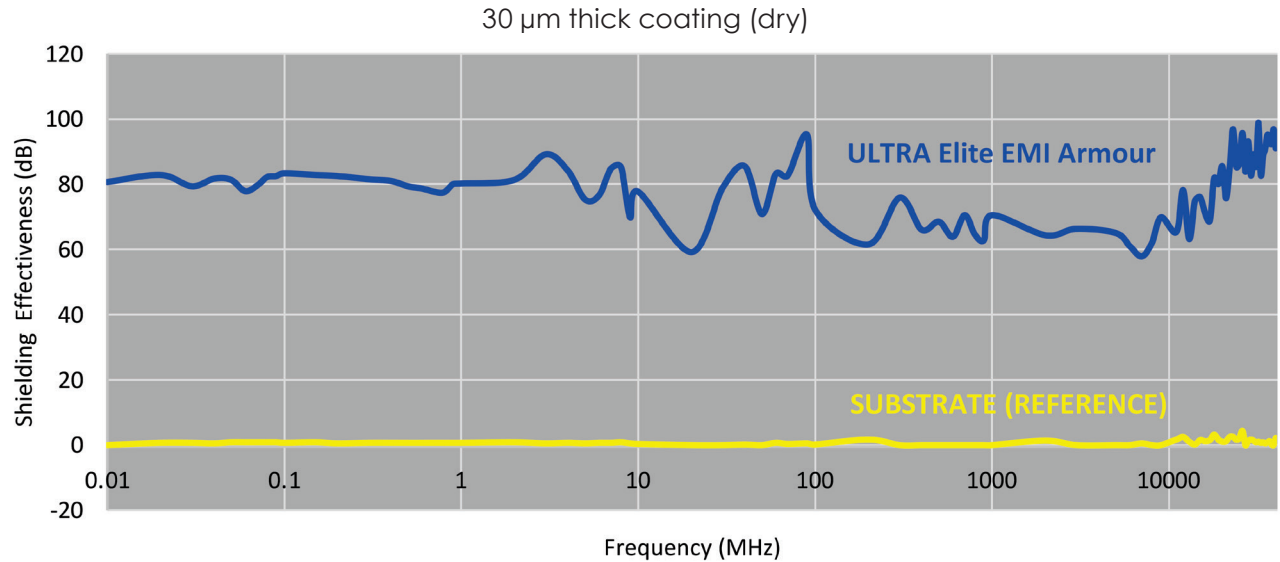
## Product Features

- Matte finish with high chemical and scratch resistance.
- High electrical and thermal conductivity (dry film).
- High EMI/RFI attenuation across a wide range of frequencies.
- Mild Solvent, safe on most substrates.
- Easy to spray or brush.
- RoHS compliant.

## Application Methods

- Air-spray, doctor blade, and roll coating.
- Please read our air-spray instructions and SDS for more details.

## Shielding Effectiveness/Signal Attenuation Data\*



\* Tested in compliance with IEEE Std. 299-2006 and MIL-STD-285 by a third party

## Clean-up & Storage

- Clean spray system with soap and de-ionized water.
- Store in a sealed container between 0-45°C, away from sunlight.

### Disclaimer

The information claimed is believed to be accurate. Nanotech Energy Inc. holds no guarantee to the accuracy of data and no liability in connection with damages when using the product.

