Nanotech Energy

Nanotech Energy provides a broad selection of cost-effective graphene-based sheets and paints for EMI/RFI applications

Nanotech Dura Elite **EMI Armour Paint**

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

Product Overview

Nanotech Dura Elite EMI Armour Paint is a two-part polyurethane conductive paint, based on Nanotech Premium Graphene Technology and silver-coated copper flakes. It can be sprayed, brushed, rolled or dip coated onto various surfaces (horizontally or vertically), such as wood, glass, plastic*, and metal. This highly conductive coating not only provides excellent external EMI/RFI protection for the equipment enclosed, but also prevents internal EMI/RFI leaking into the environment. The highly conductive shield paint can also be used to fix compromised existing shielding or conductive coatings.

This paint can be applied to the interiors of electrical components to efficiently attenuate electromagnetic interference (EMI) for equipment protection and data security. It can also be applied to the exteriors of equipment to provide corrosion resistance, abrasion protection and heat dissipation. The paint shows very good thermal conductivity, which is critical for the modern technology, in which heat sinks utilize conduction and convection for heat dissipation in order to avoid thermal shutdown.

*not recommended on polystyrene and polyethylene

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

Item #: 905132

Specifications**	Base paint	Hardener
Conductive filler	Graphene-metal composite	
Form	Liquid	
Solvent	Organic	
Color	Copper brown	Colorless
Viscosity	500-4000 cP (25°C)	<1 cP (25°C)
Calculated VOC	44.6 g/100 g	13.3 g/100 g
Density	1.6-1.8 g/mL	1.05 g/mL
Solid content	48% (w/w)	<5 % (w/w)
Mix ratio	10:1 by volume	
Thinner	Urethane thinner	
Pot life	1 h at 25°C	
Flash time	5 min	
Cure time	Dry touch 1 h @ 20°C 30 min @ 60°C Light Duty 2-3 days Fully cure 5-7 days	
Electric conductivity	300-400 S/cm (dry film)	
Thermal conductivity	1.73 ± 0.026 W/(m·K) (dry film)	
Recommended coating thickness	130 µm (dry) | 200 µm (wet)	
EMI Shielding Effectiveness	>80 dB at 100 kHz – 10 MHz >60 dB at 1 GHz and 60-90 dB at 15 – 40 GHz	
Theoretical coverage	20 mL/square foot (based on 130 um dry thickness recommended, not including paint lost to spray gun parts or container)	

Product Features

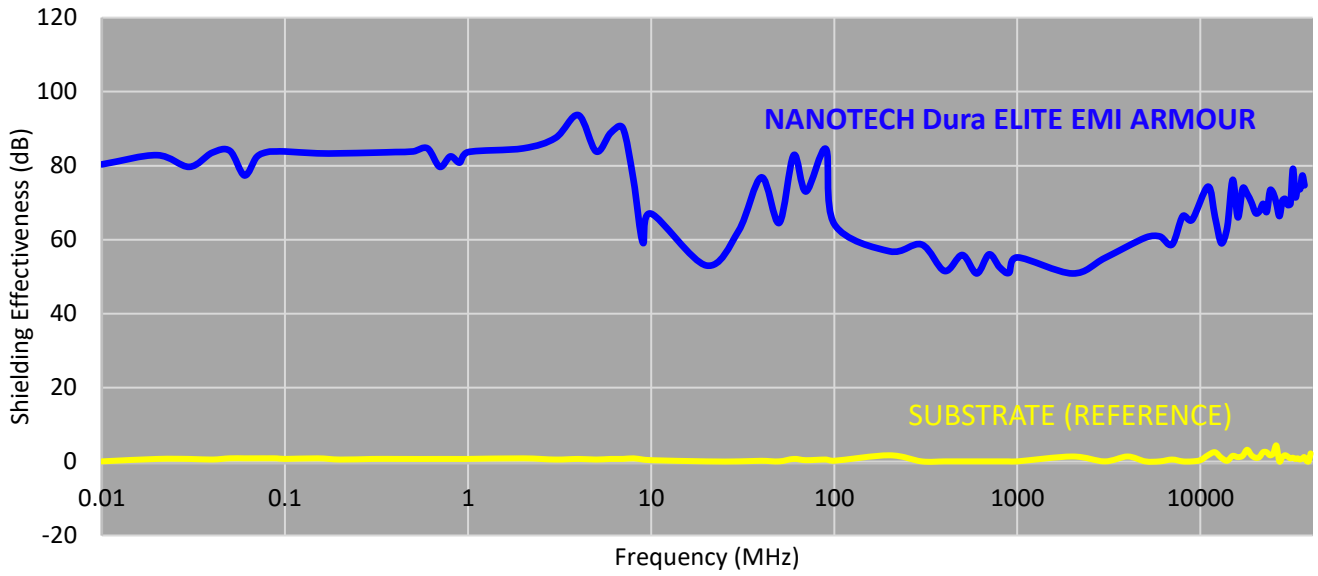
- High electrical conductivity
- Durable, flexible, robust, and chemical resistant
- High EMI/RFI attenuation across a wide range of frequencies.
- Easy to spray or roll coat at higher thicknesses (>40 mil or 1 mm)
- RoHS compliant

Application Methods

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

Shielding Effectiveness/Signal Attenuation Data*

130 µm thick coating (dry)



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

Clean-up & Storage

- Clean spray system with acetone, ethanol or lacquer thinner.
- Store in a sealed container between 20-30°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.

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