

Creating Material Change



Electrical Masterbatch Technical Data Sheet



Innovation underpins everything we do
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Electrical Masterbatch

Haydale's electrically enhanced masterbatch is a bespoke mixture of functionalised nanomaterials in epoxy resin, specifically designed to enhance the electrical conductivity of epoxy resin systems for use in conductive and electrical dissipative laminates.

The enhanced resin provides improved performance in:

- Lightning strike
- Edge glow
- Electrical screening
- Anti-static products

Product code:	MB00008
Physical form:	Viscous liquid
Appearance:	Black/Grey
Product status:	Commercial
Resin chemistry:	Epoxy
Market Sectors:	Aerospace, Marine

MB00008 Properties

Property Tested	Testing Conditions	Method Standard	Units	Value
Volume Resistivity*	23±2°C/50±10 % RH/25V**	ASTM D257	Ω.cm	8.6E+06
Surface Resistivity*	23±2°C/50±10 % RH/25V**	ASTM D257	Ω/square	1.3E+06
Density	RT	ISO 1675	g/cm ³	1.2-1.3
Complex Viscosity	60°C	ASTM D7271	mPa.s	18,000-20,000
Viscosity	60°C	ASTM D7271	mPa.s	13,000-15,000
Glass Transition Temperature (Tg)	DMA 10°C/min**	ASTM E1640	°C	200-210
Damping Coefficient (Tan Delta Max)			N/A (°C)	0.4-0.5 (216-218)
Coefficient of thermal expansion (CTE)	TMA 5°C/min**	ISO 11359	10 ⁻⁶ /K	-30-40°C: 41 60-130°C: 52

*Volume and surface resistivity averages tested at an external facility with ISO/IEC 17025:2005 and NADCAP AC7122/1 accreditations.

**Physical properties were determined using cast resin samples, where the masterbatch was diluted with further resin and curative to our recommended application loading for this system, for further details of this procedure please contact Haydale. Processing recommendations will be supplied on purchase.

The properties reported herein are typical of the product, but do not reflect normal testing variance and so should not be used for product specification purposes. Values are rounded.

For bespoke formulation into alternative resin types, please contact Haydale.

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