Creating Material Change

Electrical Masterbatch Technical Data Sheet

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Electrical Masterbatch

Haydale's electrically enhanced masterbatch has been 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 for use in:

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

Product code:	MB00008
Physical form:	Liquid
Appearance:	Black, Grey
Product status:	Commercial

MB00008 Properties

Property Tested	Sample Dimension (mm)	Testing Conditions	Method Standard	Units	Value
Volume Resistivity	3	23±2ºC/50±10%RH/25V	ASTM* D257	Ω.cm	8.59E+06
Surface Resistivity	3	23±2ºC/50±10%RH/25V	ASTM* D257	Ω/square	1.29E+06
Complex Viscosity	N/A	60ºC	ASTM D7271	Pa.s	20.04
Viscosity	N/A	60ºC	ASTM D7271	Pa.s	14.79

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

Epoxy Equivalent Weight (EEW): 117 - 134 g/eq

Recommended Hardener Type: Diamino Diphenyl Sulfone (DDS type)

Cure: This is predicated on the masterbatch being partnered with the correct Resin System.

Cure Cycle Recommendations: Curing schedule is meant to be a guide only and is subject to local conditions. Please consult Haydale with respect to oven and autoclave curing options.

The masterbatch can be processed using several techniques and several cure options. Regardless of the method used, we recommend incremental temperature increases through a ramped process cycle. Temperatures should be increased at a controlled rate of typically between 1°and 3°C per minute, followed by holding at the cure temperature for the desired period. Cool down following cure or post cure should also be undertaken in a controlled manner typically at 3°C per minute at least to 65°C.

The cure cycle suggested for this system is a minimum of 1 hour @ 135°C although other cure schedules can be employed. For maximum service and performance post cures can be employed, the post cure suggested is 2 hours @ 180°C.