

**Technical Data Sheet**  
**Secondary Insulation Impregnating Resin**

**ELAN-Guard™ EM 59-50MR Resin**

Low viscosity single component epoxy hermetic resin

**Description**

EM 59-50MR is single component water based hermetic resin. In the liquid state it is a white opaque liquid.

**Uses**

- Impregnation of small and large hermetic stators.

**Cured Properties**

EM 59-50MR has superior bond strength and resistance to all types of refrigerants.

**Catalyst**

None required.

**Recommended Cure**

4 hours at 150° C (300° F) - OR -  
2 hours 165° C  
After part reaches cure temperature

**Features and Benefits**

- Low viscosity
- Thinned with water
- UL recognized insulation systems from 130° C to 200° C
- Excellent stability
- Zero VOC

**Application Methods**

- Dip and Bake
- Roll dip

**Transportation/Storage/Shelf Life**

**Caution: DO NOT FREEZE**

This resin should be stored at 25°C (77°F) in a dry controlled environment out of direct sunlight. These materials should be suitable for use stored under these conditions in the original sealed containers for twelve (12) months from the date of shipment. Failure to store this product as recommended above may lead to deterioration in product performance and invalidate shelf life. Agitate before use.

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**Properties of Material Supplied**

<i>Test</i>	<i>Value</i>	<i>Units</i>
Viscosity @ 25°C (77°F) (ASTM D2196), typical	50 – 200	Cp
Percent non-volatile matter (ASTM D115)	48 – 52	%
Flash Point (ASTM D93),typical	>94 (>201)	°C (°F)

### TYPICAL PROPERTIES

#### Mechanical Properties – Cured 2 hours at 150°C (300°F), single dip

<i>Test</i>	<i>Value</i>	<i>Units</i>
Helical Coil Bond Strength @ 25°C (77°F) (ASTM D2519)	52	Pounds
Helical Coil Bond Strength @ 107°C (225°F) (ASTM D2519)	37	Pounds
Freon Resistance - NEMA RE-2	<1.0	%

#### Electrical Properties

<i>Test</i>	<i>Value</i>	<i>Units</i>
Dielectric Strength – AS MADE (ASTM D149)	4000	Volts/mil
Dielectric Strength after 24 hours in water (ASTM D149)	3800	Volts/mil
Film thickness	0.4	mils

#### UL Recognized Insulation Systems (E87039)

<i>Class</i>	<i>Systems</i>
Class 130	Sentry 130-I, 130-II, 130-III
Class 155	Sentry 155-I, MEGA II
Class 180	Sentry 180-V, 180-VI, 180-VII
Class 200	Sentry 200-I

The above properties are typical values and are not intended for specification use.

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