ELANTAS
Electrical Insulation

Technical Data Sheet

Secondary Insulation

Sterling® E 400 Resin
Sterling® C 12 Hardener

Two-Component Epoxy Motor Sealer

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Sterling® E 400 / C 12 Epoxy

Product Description

Sterling® E 400 / C 12 Hardener is a two-component, room temperature curing, 100%-solids resin system.

Areas of Application

Protective overcoat for motor windings, bus bars, switch gear, etc.

General-purpose adhesive

Features and Benefits

- High bond strength
- Chemical and moisture resistant
- Fast cure in thin films
- Highly filled for improved heat dissipation
- Thixotropic for application on vertical surfaces
- Suitable for Class 180 service

Application Methods

Brush on

Knife / Spatula

Transportation / Storage

Store below 25°C / 77°F in a dry controlled environment out of direct sunlight. This material 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 the product as recommended above may lead to deterioration in product performance.

Mix individual components thoroughly before use.

Health / Safety

Refer to the Material Safety Data Sheet.

Typical Properties of Material as Supplied

Property	Conditions	Value		Units
		Sterling® E 400 Resin	**Sterling® C 12 Hardener**	
Viscosity	25°C / 77°F	Thixotropic paste	400 - 800	cP
Weight per Gallon	25°C / 77°F	13.3 – 13.7	8.5 – 8.7	pounds
Flash Point	ASTM D93	> 94 > 201	> 94 > 201	°C °F
Mix Ratio	Parts by weight Parts by volume	100 100	12.5 19.5	

Sterling® E 400 / C 12 Epoxy

Typical Properties of Mixed Materials

Property	Conditions	Value	Units
Viscosity	25°C / 77°F	50,000 - 100,000	cP
Gel Time	25°C / 77°F – 250 grams	15 - 25	minutes

Application / Curing Schedule

Mix Resin and Hardener and the ratio specified above. Pot life is short; prepare only as much material as needed for the job at hand.

Apply to clean surface. Mixed material will cure to a tack-free surface in 4 – 8 hours at 25°C / 77°F. Allow 3 – 5 days to develop full properties.

The cure schedules above are based on time after the unit reaches the specified temperature and are recommendations only. The user is responsible for determining the optimum cure conditions for his application.

Typical Mechanical Properties - specimens cured 96 hours at 25°C

Property	Conditions		Value	Units
Hardness	ASTM D2240	Shore D	82	
Lap Shear Strength Aluminum to aluminum	ASTM D1002	25°C / 77°F 193°C / 380°F [1]	3000 600	psi psi
Weight Loss		28 d @ 180°C	2.8	%
Water Absorption		28 d @ 25°C / 77°F	0.5	%

[1] Cured 16 h @ 25°C / 77°F + h @ 110°C / 230°C

Typical Electrical Properties - specimens cured 96 hours at 25°C

Property	Conditions		Value	Units
Dielectric Strength	ASTM D149	25°C / 77°F – 125 mils	300	volts/mil
Dielectric Constant	ASTM D150	1 kHz – 25°C / 77°F	0.01	
Dissipation Factor	ASTM D150	1 kHz – 25°C / 77°F	4.6	

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