ELANTAS
Electrical Insulation

Technical Data Sheet
Electronic and Engineering
Materials

Sterling E297 Epoxy and C 110 Hardener

Two Component Epoxy Resin

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Description
The E297/C110 is a two component room temperature curing resin system. Part A is filled while Part B is unfilled.

Uses
- Potting and sealing of electrical and electronic equipment

Cured Properties
The E297/C110 is filled to provide good thermal conductivity.

Features and Benefits
- Room temperature cure
- Low Shrinkage
- Good thermal conductivity

Application Methods
- Vacuum Potting
- Atmospheric Potting
- Casting

Storage/Shelf Life
This resin and hardener must be stored between 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. However, filling settling may occur in the resin. It must be agitated before use.

Properties of Material Supplied

Test	***Value***		***Units***
	E-297	***C-110***	
Viscosity - 20 rpm – 25°C (77°F) (ASTM D2196), typical	8500-13,500	200 - 300	Cp
Weight per gallon @ 25°C (77°F) (ASTM D1475), typical	14.0	8.0	Pounds
Flash Point (ASTM D93)	>200	>200	°F
Mix ratio (pbw) Mix ratio (pbv)	100 100	20 35	

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TYPICAL PROPERTIES

Properties of Material Supplied – mixed

Test	*Value*	*Units*
Gel Time at 25°C(77°F) 450 grams	40	minutes
Viscosity - 20 rpm – 25°C (77°F) (ASTM D2196)	1850 – 2850	Cp

Mechanical Properties – Specimens cured 16 hours at 25°C (77°F) + 2 hours at 100°C (212°F)

Test	*Value*	*Units*
Tensile Strength (ASTM D638)	2700	Pounds/square inch
Thermal Conductivity	5.6×10^{-4}	Cal/cm/sec/°C/cm^2
Hardness, Shore D (ASTM 2240)	80	
Heat Distortion Temperature	39	°C
Coefficient of Thermal Expansion After Tg	200	ppm/°C

Electrical Properties

Test	*Value*	*Units*
Dielectric Strength – AS MADE (ASTM D149)	300	Volts/mil
Film thickness	125	Mils
Dissipation Factor @ 25°C(77°F) 60 Hz (ASTM D150)	0.08	
Dielectric Constant @ 25°C(77°F) 60 Hz (ASTM D150)	5.5	

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