POLYMER G

Technical Data:
Issued: Nov.2011
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EP 140FR/ Hardeners EPC 124/ EPC 520/ EPC 304IP55

Product Description

EP 140FR is a highly filled potting and encapsulating epoxy compound, UL 94 compliant, exhibiting high thermal conductivity, low thermal expansion and excellent electrical insulating properties. EP 140FR can be used with a variety of curing agents.

Features & Benefits

- High thermal conductivity
- Excellent electrical properties
- High temperature resistance
- Flexible pot life
- Low viscosity
- UL 94 V-0 compliant

Applications

Encapsulation of electrical and electronic devices and components, where high heat dissipation and low thermal expansion are needed

Typical Uncured Properties

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

Resin EP 140FR	
Appearance/Color	Black
Viscosity@25ºC, mPa*s	35000-55000
Density@ 25ºC, g/cm^3	2.2-2.3
Equivalent Weight (calc.), g/eq	700-800

Instructions for use:

Warm EP 140FR to 40-50ºC and stir contents thoroughly before withdrawing material.
Weigh required amount of resin and hardener into a clean container in the recommended ratio. Blend thoroughly being careful to scrape sides and bottom of the container for 3-4 minutes to ensure uniform mixture.
To produce a void-free casting the mixture should be deairing at 2-5 mmHg for 5-8 minutes to remove trapped air.
Pour the mixture into mold.
Preheating the mold reduces viscosity of the mixture and improves its flow.
Further deairing in the mold may be required.

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Processing	Resin EP 140FR	Hardeners		
		EPC 124	EPC 520*	EPC 304IP 55
	Mix Ratio, w/w	100:6.8-7.2	100:6.8-7.2	100:7.5-8.0
	Mix Viscosity@ 25°C, mPa*s	4000-7000	4000-7000	4000-7000
	Gel Time @ 25°C, (100g), min	50-70	120-150	150-180
	Typical Curing Schedule	24hr/RT	24hr/RT + 4hr/80ºC	24hr/RT
Cured Properties**	**HDT,** °C	60	108	76
	Hardness, Shore D	90	90	90
	Tensile Strength, MPa	39	40	38
	Tensile Elongation, %	0.5-0.7	0.5-0.7	0.7-1.0
	Thermal Conductivity, W/m-K	0.7 – 0.8		
	Linear Shrinkage, %	0.2		
	Service Temperature, ºC	-40÷ 130	-60÷ 160	-40÷ 130

*) Post curing at 80-100ºC is must.

**) The samples were tested after post-curing 3hr at 120ºC

Storage

The shelf life of the EP 140FR is 12 months at 20-35°C.
For the best results, store in tightly closed original containers.
Certain resins and hardeners are susceptible to crystallization. If crystallization occurs, warm the container to 50-60°C until the crystals have dissolved. Stir and allow content to cool to room temperature before use.

Packaging

Packaging sizes are available from 1L up to 18L pails.

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