ELANTAS

Secondary Insulation

Product Information
GRC 59-36 EB

Waterborne epoxy dispersions
Electrical Insulation system
Dip & Bake

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Product Description

GRC 59-36 EB is a single component epoxy dispersion. The product uses a new type of curing system that allows the product to be cured at a lower temperature and has good storage stability.

GRC 59-36 EB is composed of waterborne epoxy dispersions and curing agents. When the liquid material is exposed to the air, the water evaporates rapidly, while the resin is polymerized into a polymer film. Once this polymerization occurs, the high molecular weight resin stops the product from leaking or flowing. Because the paint does not form a "paint tumor", so inside and outside parts are very clean. Even if the cleaning of components after baking can not be omitted, at least it can be reduced to a minimum.

Unlike solvent impregnating paints, GRC 59-36 EB is technically an aqueous dispersion of epoxy resin. Water content above 50% also allows the product to be free of solvent smoke during curing and has a high level of safety in use. Because of this feature, users will not have to apply for "V air pollution permits" for this product without applying for permission to use dangerous goods.

GRC 59-36 EB is compatible with most insulation systems, has good chemical and water resistance, and is insensitive to moisture.

Areas of Application

Through the traditional immersion baking process, GRC 59-36EB is mainly used for impregnating insulation of small motor stator.

Processing

For the traditional dipping and baking process, the following procedures are recommended:

- 100 °C preheating 30-60 minutes.。
- Cool to below 60 °C
- Impregnated to bubble free
- Lift the parts and paint for 5-10 minutes
- In 125-135 °C baking 1-2 hour.
- Remove and cool

The curing temperature of the GRC 59-36EB is 120 to 135 °C , making concrete curing system, must consider the temperature of components will significantly lags behind the air temperature in the furnace, the lag degree will be determined by the efficiency of heating components, size and curing furnace.

Usually 10 cm in diameter of the stator, baking process is recommended as follows:

120 degrees 30-45 minutes + 130 degrees 30-45 minutes

Packaging

Elantas GRC 59-36 EB is currently sold in 1000kg and 200kg containers .

Health & Safety

Refer to Elantas Zhuhai Material Safety Data Sheet (MSDS).

Shelf life

6months.
Store in unopened containers. Drum stock should be stored at 4-30°C out of direct sunlight and away from heat sources.

Properties of component as supplied

properties	condition	Test Method	Typical Value
Appearance	-	Visual Inspection	White emulsion
Viscosity	Tu 4 cup,25±1°C	ISO 2431 EEIZ-WI/RD 05.004	15 - 40 seconds
Density	25°C	ISO 2811 EEIZ-WI/RD 05.002	1.04 -1.08 g/ml
Solid content	1-1-150°C	ISO 3251 EEIZ-WI/RD 05.003	35 - 37%
Flash point	-	-	>94°C

Mechanical properties (18%in cure condition)

properties	condition	Test Method	Typical Value
Bond strength	25°C	IEC 61033 EEIZ-WI/RD 05.053	120 N
	90°C		80 N
	130°C		32 N

Electrical properties

properties	condition	Test Method	Typical Value
Volume resistivity	As made	IEC 60464 EEIZ-WI/RD 05.058	$1.85 \times 10^{16} \Omega \cdot cm$
Surface resistivity	As made	IEC 60464 EEIZ-WI/RD 05.058	$1.25 \times 10^{15} \Omega \cdot cm^2$
Dielectric strength	As made	IEC 60464 EEIZ-WI/RD 05.037	>110 kV/mm
	24h in water		>80 kV/mm

Chemical properties

Tidal test of silicon steel sheet	-	Pass	
Compatibility of bearings	-	NSK, 608D	Pass
		HCH, 608D	Pass
		NMB, 608D	Pass

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