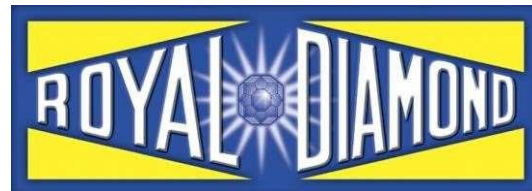


ROYAPOX 511, two component thermal class F - 155°C



PRODUCT DESCRIPTION

ROYAPOX 511 is an epoxy resin presented in two-component form, the components slowly reacting at room temperature or rapidly when heated. They form a solid, hard and adherent mass with certain flexibility, conferring great cohesion to coil against centrifugal force and good heat conductivity. Good compatibility with Class F and H enameled wires. High resistance to refrigeration gases (FREON 22).

APPLICATION

ROYAPOX 511 epoxy resin is specially designed for impregnating stators and rotors using a trickle application system. It can also be used for unit impregnations of pre-heated coils..

HOW TO USE

The resin is supplied in two separate and pre-dosed components: ROYAPOX 511 and ENDURECEDOR 511. The weight mixture ratio (resin/hardener) is 100/50. The airtight and sealed recipients should be stored at room temperature (15-25°C) for a shelf-life of up to 1 year. At the mix proportion of the two components mentioned above, it keeps for a period of 5 hours at a room temperature of 20°C. Therefore, it is convenient to mix the product on an as-needed basis.

a) Trickle impregnation process (stators and rotors). This resin permits application for automatic mass production as well as single-head machines for repair work.

1. Mix resin/hardener with a proportion of 100/50 by weight.
2. Pre-heat the coil to 80°C (oven or Joule effect).
3. Drip-apply at rotation speed of 30 rpm and 17°C inclination.
4. Dosage of resin at 130°C for 5-6 minutes.
5. Can be re-fired for 1 hour at 120°C to obtain optimum mechanical and dielectric features.

b) Unit impregnation process (stators). This system is practical for impregnating stators which cannot be drip-impregnated due to their size.

1. Pre-heat coil at 100°C.
2. Mix resin/hardener with a proportion of 100/50 by weight.
3. Place the stator with the grooves in vertical position to facilitate penetration and spill resin from the upper part; make sure all coil heads are impregnated.
4. The resin will be gelified in 15-20 minutes.
5. Final drying can be at room temperature (8 hours) or oven-dried for 1 hour at 100°C.

CHARACTERISTICS

	ROYAPOX 511	ENDURECEDOR 511	MIX 100/50
Viscosity at 25°C (mPa.s)	4000 ± 1000	250 ± 100	1000 ± 200
Density at 20°C (g/cm ³)	1,15 ± 0,01	0,95 ± 0,02	1,0 ± 0,01
Pot Life at 25°C (min.)	400		
Total polymerization	2h at 120°C		
Shore D hardness	78		
Tensile strength (MPa)	56		
Elongation (%)	9		
Water absorption 24h. 20°C (%weight)	0.15		
Dielectric strength, 50Hz 20°C (KV/mm)	20		

Surface resistance (Ohm) 5. 10¹²
Specific resistance (Ohm.cm) 1.3. 10¹⁵
Dissipation factor tg, 50Hz 20°C 0.003
Inductive capacity, 50Hz 25°C..... 3.8
Martens Heat deformation resistance 50
Thermal conductivity (W/mK) 0.15

PACKAGES

The product is available in 1kg, 5kg and 25kg packages.

