

1. IMPREGNATING RESINS VUPOS/ Polyesterimide in styrene/ **NZ 83/500**



CABLES



IMPREGNANTS



WIRES



RESEARCH

(UL certification - pending)

Application:

This resin is suitable for impregnation the mechanically stressed windings for example rotor winding of low voltage electrical rotating machines by trickle method.

Characteristics:

Two – component trickle resin NZ 83/500 is a solution of unsaturated polyesterimide in styrene. Before processing it must be mixed with a hardener Z 83 in the mass ratio 100:2. Trickle resin is cured at temperature 130 °C. It is resistant to vapour solvents, transformer oils and refrigerator liquids.

Processing data:

Density (DIN 53 217)	20 °C	[kg/m ³]	1050-1070
Flow time (DIN Cup 4)	23 °C	[s]	
Viscosity	23 °C	[mPa.s]	450-550
Shelf- life	max. 23 °C	[months]	min. 6
Flash point (AP)		[°C]	31
Gel-time ¹	100 °C	[min]	3-4
Pot life	max. 23 °C	[days]	min. 7
Reaction time ^{2,3}	100 °C	[min]	5-6
Maximum temperature ^{2,3}	100 °C	[°C]	200-220
Curing time ⁴	130 °C	[min]	15-30
Effect of resin on enamelled wires ⁵			OK

Polyesterimide in styrene



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Properties after cure:

Curing of test specimen		130 °C	[h] 1
Ability to cure in considerable thickness ^{2,6}		[degree ¹⁰]	S 1 U 1 I 1.1
Electric strength ^{2,7}		23 °C 155 °C after 96 h in 92% humidity 23 °C	[kV/mm] 100 80 60
Volume resistance ²		23 °C 155 °C after immersion in water for 240h at 23 °C	[Ω .m] 3x10 ¹⁴ 2x10 ¹¹ 2x10 ¹³
Twisted coil test ⁸		23 °C 155 °C	[N] 300-350 35 – 40
Thermal endurance ⁹ Test criterion:	Bond strength 22 N (Helical coil)		[°C] 174
	Breakdown voltage 700 V (Twist)		[°C] 182

1. DIN 16 945 Method A

2. DIN 46 448 Blatt 1

3. Fe-Ko –thermoelement after ASTM D 2471-71

4. After the winding has reached 130°C

5. STN 67 3150 čl. 11, met. B after 60 min at 60 °C

6. 1 h at 100 °C + 1 h at 130 °C

7. Test specimens A2, cylindrical electrode ø6 mm

8. IEC 61033 met. A

9. IEC 60216

10. The upper side: S – smooth

The underside : U - non tacky

The interior: I – hard , free of bubbles

Packing a storage:

Impregnating resin is delivered in drums. It has to be stored in tightly closed drums at temperature max. +23 °C.

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