IMPREGNANTS | IMPREGNANTY

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





IMPREGNANTS WIRES







(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.

Charakteristics:

Two — component trickle resin NZ 83 is a solution of unsaturated polyesterimid in styrene. Before processing it must be mixed with an 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/m³]	1050-1070
Flow time (DIN Cup 4)	23°C	[s]	55-65
Viscosity	23°C	[mPa.s]	200-250
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



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(r) RESEARCH

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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	$[\Omega$.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)	[3']	182

- 1. DIN 16 945 Method A
- 2. DIN 46 448 Blatt 1
- 3. Fe-Ko —thermoelement after ASTMD 2471-71
- 4. After the winding has reached 130°C
- 5. STN 67 3150 part. 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 have to be stored in tightly closed drums at temperature max. +23 °C.



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