

3. IMPREGNATING RESINS **VUDAC**/ Polyesterimide in diacrylate/ **NAB/UV-1K**



CABLES



IMPREGNANTS



WIRES



RESEARCH

(UL certification - pending)

Application:

Impregnating resin is suitable for insulation systems – thermal class H. It is suitable for impregnation of windings of electrical rotating machines and transformers from big diameter enameled wires and from rectangular wires.

Characteristics:

Impregnating resin is one component solution of diluted unsaturated polyesterimide in diacrylate. Only a small amount of volatile substances avoid during curing. Impregnating resin doesn't pollute the environment and doesn't cause fire hazards. It is not necessary to clean exhaust air.

Processing data and properties of liquid resin:

Density (DIN 53 217)	20°C	[kg/m ³]	1050 - 1150
Viscosity	25°C	[mPa.s]	2000 - 2500
Shelf- life	+5°C - 25°C	[month]	min. 6
Flash point (Cleveland)		°C	>110
Gel-time ¹	130°C	[min]	3 - 5
Gel-time ¹	100 °C		
Reaction time ^{2,3}	130°C	[min]	4 - 7
Maximum temperature ^{2,3}	130°C	[°C]	190 - 230
Curing time ⁴	130°C	[h]	2 - 3
Effect of resin on enameled wires ⁵			OK



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Properties after cure:

Curing of test specimen	150 °C	[h]	1
Ability to cure in considerable thickness ^{2,6}		[degree ¹⁰]	I. 1.1.1. ¹⁰ 0. 1.1.1.
Electric strength ^{2,7}	23 °C 155 °C after 96 hrs at 92 % relative humidity in water at 23 °C	[kV/mm]	80 60 50
Volume resistivity ²	23 °C 155 °C after immersion in water for 96 hours at 23 °C	[Ω.m]	10 ¹⁴ 10 ⁹ 10 ¹¹
Twisted coil test ⁸	23 °C 155 °C 180 °C	[N]	250 65 50
Thermal endurance ⁹		[°C]	180
Thermal endurance ¹¹ Test criterion:	Breakdown voltage 1500 V (Twisted pairs)*	[°C]	180

1. DIN 16 945 Method A

2. DIN 46 448 Blatt 1

3. Fe-Ko after ASTM D 2471-71

4. from reached temperature 130 °C in winding

5. STN 67 31 50 part. 11, met. B after 60 min at 60 °C

6. 2 h at 100 °C + 2 h at 130 °C

7. Test specimens A2, cylindrical electrode Ø 6 mm

8. IEC 61033 met. A,

9. IEC 60216-1,-2

10. The upper side: S – smooth

The underside: U - non tacky

The interior: I – hard, free of bubbles

11. UL test 1446 File E233982

Packing and storage:

Impregnating resins are delivered in drums. They have to be stored in tightly closed drums at temperature from +5 °C to +25 °C.

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