



CABLES



IMPREGNANTS



WIRES



RESEARCH



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.

Charakteristics:

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.

Polyesterimide in diacrylate

Processing data and properties of liquid resin:

			NAB/400-1K	NAB/400-1Kn
Density ¹	20 °C	kg.m ⁻³	1040 – 1100	1050 – 1150
Viscosity	25 °C	mPa.s	400 – 600	400 – 600
Shelf-time	+ 5 °C až + 25 °C	mesiace	min. 6	min. 6
Flash point ²		°C	> 112	> 112
Gel time ³	130 °C	min	3 – 5	3 – 5
Reaction time ^{4,5}	130 °C	min	4 – 6	4 – 6
Maximum temperature ^{4,5}	130 °C	°C	180 – 230	180 – 230
Curing time ⁶	130 °C 150 °C	h	2 – 3 1 – 1,5	2 – 3 1 – 1,5
Effect of resin on enameled wires ⁷			OK	OK



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Properties after cure:

			NAB/400-1K	NAB/400-1Kn
Ability to cure in considerable thickness ^{4,8}			I.1.1.1. ¹² O.1.1.1.	I.1.1.1. ¹² O.1.1.1.
Curing of test specimen	150 °C	h	1	1
Thickness of film on Al plate		µm	8	52
Electric strength ^{4,9}	23 °C	kV/mm	60	60
	180 °C		50	50
	after 96 h at 92 % relative humidity at 23 °C		45	45
Volume resistivity ⁴	23 °C	Ω.m	10 ¹⁴	10 ¹⁴
	180 °C		10 ⁹	10 ⁹
	after immersion in water for 96 h at 23 °C		10 ¹³	10 ¹³
Twisted coil test ¹⁰	23 °C	N	220	220
	180 °C		60	60
Thermal endurance ¹¹	breakdown voltage 1500 V (twisted pairs)	°C	180	180
Test criterium:				

¹ DIN 53217

² STN EN 22592

³ DIN 16945 Verfahren A

⁴ DIN 46448 Blatt 1

⁵ Fe-Ko after ASTM D 2471-71

⁶ from reached temperature 130 °C (150 °C) in winding

⁷ STN 67 3150 part 11, met. B

⁸ 1 h at 180 °C + 1 h at 100 °C + 1 h at 150 °C

⁹ test specimens A2, cylindrical electrode ø 6 mm

¹⁰ STN IEC 61033/A

¹¹ STN IEC 60216-1,-2

¹² the upper side: S – smooth, the underside: U – non tacky, the interior: I – hard, free of bubbles

Packing and storage:

Impregnating resin is delivered in no-returnable, clean metal package in amount of 200 kg and 50 kg, or according to contract between producer and customer. Impregnant has to be stored in tightly closed package in dry and ventilated place at temperature from + 5 °C to + 25 °C (according to STN 65 0201). Concerning of transport – impregnant is not classified as a hazardous product.

The information provided herein accords with our knowledges about the subject on the date of publication. This information might be revised if new knowledges and experience will be available. The data provided fall within the normal range of product properties are related only to the specific material. These data may not be valid for such material used in combination with any other materials or additives or in any process, unless expressly indicated otherwise. The data provided should not be used to set limits or used alone as the basis for design. The data are not intended for substitute of any testing that you might need to do for decision if the specific material is suitable for your particular purposes. Since VUKI ca not anticipate all variants in actual end-use conditions, VUKI makes no warranties and assumes no liability in connection with any use of this information. Nothing in this document is to be considered as a

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