

NAB/800-1K AC



VUDAC IMPREGNANTS

Characteristic

NAB/800-1K AC is a medium-viscosity single-component impregnant based on unsaturated polyester-imide resin dissolved in reactive diacrylate. Compared to other acrylic impregnating resins, it has improved anti-corrosion properties. It has a slightly cloudy yellow to pale brown appearance and is odorless. There is little emission (VOC) released during curing. Does not pollute the work environment, does not create a fire hazard. Waste air does not need to be cleaned.

Impregnating resin is characterized by the following properties:

- ecological
- excellent thermal resistance
- excellent mechanical strength at working temperature of motor
- low energy consumption during curing
- excellent ability to form a sufficient insulating layer
- excellent resistance to corrosion and moisture
- minimum cure losses
- **resistant against moisture and corrosion**
- perfect crosslinking
- highly stable in liquid state
- resistant to transformer oil and cooling liquids

Field of application

NAB/800-1K AC is suitable for applications in temperature class H. It is designed for the impregnation of:

- windings of electric rotary machines of general use
- transformers
- Electric machines wound with large diameter varnished wires and large cross section profile wires, where anticorrosive treatment is required.

Processing

NAB/800-1K AC can be processed on conventional impregnation devices at atmospheric pressure or vacuum by dipping, flooding or widening under rotation. Exact instructions for processing will be provided depending on the customer's processing method.

It can be processed immediately without the need to add additional additives as it is a one-component system. The recommended impregnant change in the tank is 20% of the total volume per month.

The processing equipment may not be explosion-proof, and no additional combustion equipment for emissions is needed. The winding can be heated to 30-40 °C prior to impregnation, and it is also possible to heat the impregnation during 25-30 °C during impregnation.

When handling the impregnator, follow the safety instructions in the **Safety Data Sheet**.

To clean the equipment and work tools from undamaged impregnant it is recommended to use VUKI thinner T5.

Hardening

Curing conditions:

- Conventional curing: 2 – 3 hours at 130 °C, or
1 – 1,5 hours at 150 °C
- Oven has to be equipped with vapor extraction



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Processing properties

Parameter	Standard	Condition	Value	Unit	Description
Density	STN EN ISO 2811-1	20 °C	1080 – 1120	kg/m ³	
Viscosity	STN 67 3014	25 °C	700 – 1000	mPa.s	value adjustable according to customer request
Stability		23 °C 40 °C	min. 6 min. 1	Month	
Flash point	STN EN ISO 2592		> 112	°C	
Gel time	DIN 16 945	100 °C 130 °C	15 – 20 2/30 – 5	min	
Reaction time	STN EN 60455-2	130 °C	4 – 6	min	
Exothermic temperature	STN EN 60455-2	130 °C	180 – 230	°C	
VOC			< 2	%	
Hardening time		130 °C	2 – 3	h	from reaching a temperature of 130°C in the winding
		150 °C	1 – 1,5	min	from reaching a temperature of 150°C in the winding
Effect on enameled wires	STN EN 60851-4,5 STN EN 60317		suitable		compatible with all commonly used wires

Parameters after hardening

Parameter	Standard	Condition	Value	Unit	Description
Drying in thick layer	STN EN 60464-2	1 h at 150 °C	I 1.1 S1 U1		sample solid, no cracks and bubbles, surface smooth, non-stick
Layer thickness on AL sheet			24	µm	
Electrical strength	STN EN 60243-1	23 °C 180 °C after 24 h immersed in water at 23 °C	> 60 > 45 > 40	kV/mm	cylindrical electrodes ø 6 mm
Volume resistivity	STN EN 62631-3-1	23 °C 180 °C after 96 h immersed in water at 23 °C	10 ¹⁴ 10 ⁹ 10 ¹⁴	Ω.m	
Twisted coil strength	STN EN 61 033 art. 2.1 method A	23 °C 180 °C	> 200 > 50	N	
Temperature index	STN IEC 60 216		180	°C	



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Packing, storing and manipulation

Impregnating resin is supplied in non-returnable, clean, metal drums with weight 25 kg and 200 kg. Alternatively, other packaging can be used according agreement. Impregnating resin is stored in tightly closed containers in a dry, ventilated place at + 5 °C to + 25 °C. When the storage conditions are met, the quality of the impregnating resin is guaranteed 6 months from the date of manufacture.

CAUTION: Extreme heat, contamination or exposure to direct sunlight may result in the polymerization and deterioration of the impregnant!
Impregnating resin is not classified as a dangerous product.

Safety

The impregnant contains butanediol dimethacrylate as the reactive solvent. Impregnant is Liquid IV. hazard classes according to Decree of the Ministry of the Interior no. 86/999 Z. z. Safety and health instructions are provided in the Safety Data Sheet

Certificates

- twisted pairs: 180 °C, thermal class H (UL file E233982)
- helical coils: 180 °C, thermal class H (UL file E233982)

NOTE

The information in this document is consistent with our best knowledge of the date of publication. This information can be a subject of revision without prior notice if new knowledge and experience are available. The data provided falls within the normal range of product properties and relates only to the specified material. These data may not apply to materials used in combination with other materials or ingredients or other processes, unless expressly stated otherwise. The data provided should not be used to set limits or used separately as a basis for the sample: they are not intended to compensate for any testing that may be necessary to make a decision as to whether the specific material is suitable for your particular purpose. Because VUKI cannot predict all variants of end-use product conditions, VUKI does not provide guarantees and has no responsibility with respect to any use of this information. Nothing in this publication is considered to be a use or recommendation to violate any patent rights.

Contact

VUKI a.s., Rybníčná 38, 831 07 Bratislava 06
Customer service – tel.: +421 906 063 231, +421 906 063 107
e-mail: info@vuki.sk
<http://www.vuki.sk>

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