

WASOL 40



VULAK® WATER SOLUBLE IMPREGNANTS

Characteristic

WASOL 40 is water soluble modified polyester – alkyd varnish with 40% of solid content. It is an emulsion, low viscous liquid in the color of the ivory (brownish, depending on the light). WASOL 40 can also be prepared in three color versions (yellow, blue or red), the dye does not affect the processing properties and stability of impregnating resin.

Impregnating varnish is characterized by the following properties:

- VOC content approaching zero = low ecological costs
- Absolutely safe and comfortable operation without risk of explosion (non-combustible)
- Without unpleasant odors and negative impacts on human health
- Shorter curing time (more economical)
- During curing, mainly water evaporates that does not belong to air pollutants escapes
- Excellent penetration ability even without vacuum
- Very good adhesion and flexibility
- Form a continuous homogeneous film on the transformer and motor frame
- Perfect mechanical strength
- Good electrical properties

Field of application

WASOL 40 is intended for insulation systems of temperature class F (155 °C) and H (180 °C). It is used for impregnation of low and medium voltage transformers as well as several types of motors.

The most common applications:

- Motors of grass cutters
- Home tool motors
- Welding transformers
- Low and medium sized LV Transformers
- Widely used by repair shops of electric motors and transformers

Processing

WASOL 40 is suitable for impregnation by dipping, impregnation under vacuum or VPI impregnation. Exact instructions for processing will be provided depending on the customer's processing method.

With a relatively low viscosity, a high solids content is achieved allowing customers to achieve a sufficient increase in impregnation in the winding after a single impregnation.

Since its stability is very good, it can be preheated to 30-40 °C for better penetration of winding. A stainless steel or galvanized container is recommended for this product.

Impregnation can be diluted with demineralized water by the user. Main quality parameter, the PH factor of impregnating varnish is possible to easily measured by pH papers (i.e. litmus paper).

When handling the impregnating resin, follow the safety instructions in the Safety Data Sheet.

CAUTION: Impregnating varnish must not freeze!

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

Hardening

Hardening conditions:

- 2 hours at 150 °C, or
- 3,5 hours at 135 °C



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Processing properties

Parameter	Standard	Condition	Value	Unit	Description
Density	STN EN ISO 2811-1	23 °C	1060 – 1080	kg/m ³	
Flow time	STN EN ISO 2431	23°C	25 - 80	s	Cup ISO 4
Solid content	STN EN ISO 3251		37,5 ±2,5	%	1,5 g / 1 hour / 130°C
Stability		1 - 25 °C	min. 12	month	
pH			7 - 8	°C	

Parameters after hardening

Parameter	Standard	Condition	Value	Unit	Description
Layer thickness on AL sheet			15,6	µm	
Electrical strength	STN EN 60243-1	23 °C 180 °C 96 h, 92% rel. hum. at 23°C	185 103 259	kV/mm	cylindrical electrodes ø 6 mm
Twisted coil strength	STN EN 61 033 art. 2.1 method A	23 °C 180 °C	250 42	N	
Helical coil strength	STN EN 61 033 art. 2.1 method B	23 °C 180 °C	143 20	N	

Packing, storing and manipulation

WASOL-40 is filled into non-returnable, clean, 50 l plastic containers, 200 l plastic drums or in plastic packaging according to the agreement between the manufacturer and the customer. Impregnation should be stored in tightly closed containers in a dry, ventilated place at temperatures from 1 ° C to + 25 ° C.

CAUTION: It is necessary to protect it from frost.

The shelf life of the impregnant is 12 months from the date of manufacture.

WASOL-40 is transported in covered vehicles. Packages must be kept upright and secured against shifting. Impregnation must not be exposed to freeze!

CAUTION: Exposure to freeze may result in deterioration of the impregnant!

Impregnating resin is not classified as a dangerous product.

Certificates

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

Safety

Disposable packaging after perfect emptying and wiping can be removed as other waste. If emptying is not possible, the packaging is disposed of as hazardous waste



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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.

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