

# VUPOXY E-1K



VUPOXY IMPREGNANTS

## Characteristic

VUPOXY E-1K is a trickling, single component impregnating resin based on modified epoxy resin.

It is characterized by the following properties:

- low content of volatile substances „VOC = 0“
- excellent mechanical strength
- good penetration ability
- short curing time at 160 °C
- resistance to solvent vapors, transformer oil and freon

## Field of application

VUPOXY E-1K is a trickling impregnating resin. It is suitable for insulation systems of temperature classes F and H. It is designed for impregnation of high mechanically and thermally stressed windings of rotors of:

- alternators
- high speed electric rotary machines for household appliances and hand tools

## Processing

Exact instructions for processing will be provided based on the particular impregnation method and the type of electric machine.

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

To clean equipment and work tools from non-hardened impregnant, it is recommended to use VUKI thinner T5.

## Hardening

Hardening conditions:

- Conventional curing: 15 – 30 minutes from reaching 160°C inside the windings

## Processing properties

Parameter	Standard	Condition	Value	Unit	Description
Density	STN EN ISO 2811-1	20 °C	1150 – 1170	kg/m <sup>3</sup>	
Viscosity	STN 67 3014	23 °C	700 – 900	mPa.s	
Shelf life		max. 25 °C	6	month	
Flash point	STN EN ISO 2592		> 140	°C	
Gel time	DIN 16 945	130 °C 160 °C	5 – 8 2 – 3	min	
Hardening time		160 °C	15 – 30	min	from reaching a temperature of 160°C in the winding
Effect on enameled wires	STN EN 60851-4,5 STN EN 60317		suitable		compatible with all commonly used wires



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### Parameters after hardening

Parameter	Standard	Condition	Value	Unit	Description
Dielectric strength	STN EN 60243-1	23 °C after 96 h in 92 % r.h.23 °C	180 – 220 60 – 70	kV/mm	Cylindrical electrodes ø 6 mm
Power loss factor	STN IEC 60455-2	23 °C 130 °C	0,5 1,2	%	
Twisted coil strength	STN EN 61 033 art. 2.1 method A	23 °C 155 °C 180 °C	600 – 640 94 – 97 87 – 91	N	
Temperature index			180	°C	

### Packing, storing and manipulation

Impregnating resin is supplied in non-returnable, clean, metal drums with weight according agreement. Impregnating resin is stored in tightly closed containers in a dry, ventilated place at temperature maximally +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!

### Certification

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

### NOTE

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