



TECHNICAL DATA SHEET

VILEPOX[®] U-281

A two-component varnish system hardening at room-temperature

Application:

A two-component varnish used for impregnation of small transformers, coils, and if soluted with Vilepox[®] H-3 for coating of different electric and electronic parts.

Characteristics

- Excellent dielectric properties
- Excellent mechanical properties
- Excellent thermal resistance, F thermal class
- Good application properties
- Low solvent-content

Specification of the components

„A” component of VILEPOX[®] U-281

	Vilepox [®] U-281 „A”	Vilepox [®] U-281 „B”
	A solution of special polioli in aliphatic esthers	Aromás poliizocianátok oldata
Appearance:	yellowish, thin liquid	yellowish liquid
Density (at 25 °C), g/cm³	0,95-1,00	1,12 – 1,16
Viscosity (at 25°C), mPas	100-250	400-800
Non-volatile matter content, %	77-81	65-70
Shelf-life	min. 12 months	min. 6 months
Storage*	in a dry room, far away from heating in original airtight containers at +5-+20 °C	
Flammability	II. grade, flammable and explosive	II. grade, flammable and explosive
Packaging	in metal containers	in metal containers
Dangerous decomposition product	during burning toxic gases and vapours get generated e.g. carbon monoxide, carbon-dioxide	

*Attention! Component „B” is sensitive to humidity, reacting with it creates a tough plastic layer. Therefore special attention must be paid to closing the container right after pouring out the necessary amount of the component. Right after pouring it out the edges of the container must be cleaned with paper or rag, so the top can be removed easily later on. Afterwards the container must be closed immediately.

Specification of the mixture

Mixing ratio:

VILEPOX[®] U-281 component "A"
VILEPOX[®] U-281 component "B"

100 parts of mass (kg)
100 parts of mass (kg)



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	The mixture
Density (at 25 °C), g/cm ³	1,0-1,1
Initial viscosity (at 25 °C), mPas	200-400
Potlife: Time to reach triple viscosity, 50g, at 25°C, min	appr. 420
Suggested circumstances of hardening:	room temp.: +10°C-+25°C humidity of the working place: 40-60 %
Drying time, 1 grade, 25 °C, hours	2,5-5
Drying time, 4 grade, 25 °C, hours	appr. 18
Impact of enamel wire	not harmful
Impact on copper	does not cause corrosion

	The hardened material
Cohesion on steel, grade	1
Cohesion on copper, grade	1
Elasticity with bending, mm	3
Resistance to oil	resistant both cold and warm
Specific surface resistivity, Ohm	min. 10 ¹⁴
Examinations must be done after 7-day conditioning at room temperature!	

Labour safety information

During work: Closed working-clothes, safety glasses and gloves have to be worn.

Skinprotection: A skin-protective cream has to be applied on hands before starting work.

Removing the material from the skin: The material has to be absorbed with a dry clothes or paper and the skin has to be washed with soapy warm water and dried, then creamed with a protective cream afterwards. The dirty paper or clothes used for absorption should be disposed to a plastic container or sack.

Ventilation: The working place has to be ventilated 3-5 times an hour. Workers should avoid breathing in the vapours.

First-aid: In case the material gets to the eyes, they should be rinsed thoroughly with water for 15 minutes and the worker should see a doctor as soon as possible. From skin the material should be removed as above. Contaminated clothes should be taken off immediately. In case somebody feels unwell after breathing in vapours he has to be taken on open air and see a doctor as soon as possible.

Labour safety and environmental informations are detailed in the „Safety data sheets” of the product.

Safety regulations referring materials belonging to II. flammability grade must be strictly observed during work!



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Information on application

- Before application the components of VILEPOX® U-281 have to be mixed according to the mixing ratio. After that the varnish is ready to apply. If necessary it may be soluted with VILEPOX® H-3.

(An often used solution: component „A” 100 parts of mass/component „B” 100 parts of mass/Vilepox® H-3 100 parts of mass.)

-The mixture has to be used within 4-6 hours. Using material with increased viscosity is forbidden!

-Surfaces must be cleaned, degreased and deoxidized. Afterwards the varnish may be applied with usual methods at room temperature in a lightly ventilated room free of dust and humidity. This way it is „dustdry” in 6 hours, totally dry in 24 hours.

-In case of more layers, every layer must be totally dried.

-In case of impregnation of coils, they should be pre-dried through few hours at 105-110 °C. This way the moisture absorbed by the integrated parts can exhale. The dry coil can be impregnated with the soluted varnish-mixture mainly by dipping or sprinkling, or possibly by brushing. Drying of the coils may be accelerated by blowing a 40-60°C air-flow through them.

The information contained in this data sheet has been collected on the basis of our best engineering knowledge, however, it is not intended to provide any legal commitment.



Vilepox U-281 ENG 4.

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