



TECHNICAL DATA SHEET

VILEPOX[®]/VILTER[®] systems Vilepox[®] U-461/45 Soft, fire retardant PUR Casting Resin

Temporary data sheet

Application:

A soft system for potting and casting of small and medium-sized transformers, capacitors, coils etc. It gives the advantage of wide range of application.

Two- component, fire retardant system hardening at room temperature.

Characteristics:

- fire retardant V-0 / 4 mm
- UL certified 
- „B” heat class, working temperature -25-130 °C
- soft type
- good dielectric properties
- good thermal-shock resistance
- good thermal conductivity
- thermal-resistance to -25°C-ig
- very low viscosity before hardening, bubble-free casting
- suitable both for manual and mechanical casting
- available in natural and colour versions
- free of solvents and halogens
- satisfies the requirements of RoHS

Specification of the components:

CHARACTERISTICS	STANDARD	UNIT	VALUE	
			VILEPOX U-461/45 component „A”	VILEPOX U-461/45 component „B”
Description	-	-	a special poliol with inorganic fillers*	polyisocyanate hardener
Appearance	HSZ 003	-	beige, viscous liquid **	brown transparent liquid
Density (25 °C)	ISO 1675	g/cm ³	1,54 - 1,58	1,18 - 1,22
Viscosity (25°C)	ISO 2555	mPas	7000 - 11000	20 - 50
Storage conditions	-	-	in a dry place far away from direct heat, in tightly closed containers at 5-25°C	
Storage stability	-	months	6	6
Packaging ***	-	-	metal can of 30 kg	metal can of 6 kg
Flammability	-	grade	III.	III.
Dangerous disintegration products	during burning toxic gases and vapours get generated e.g. carbon monoxide, carbon-dioxide, nitrogen oxides			



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* Sedimentation may occur.

** On special request other colours are also available.

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Specification of the mixture:

Mixing ratio: **VILEPOX U-461/45 component „A”** **100 parts of mass (kg)**
 VILEPOX U-461/45 component „B” **16 parts of mass (kg)**

CHARACTERISTICS	STANDARD	UNIT	VALUE
Gel time (25°C, 100 g)	HSZ 001	min.	200 - 240
Density (25 °C)	HSZ 004 (ISO 1675)	g/cm ³	1,46 - 1,50
Initial viscosity (25 °C)	HSZ 010 (ISO 2555)	mPas	1100 - 1700
Potlife: Time of doubling of viscosity (25°C, 50 g)	HSZ 010 (ISO 2555)	min.	appr. 60
Hardening time at room temperature	-	hours	appr. 24
Full hardening at room temperature	-	days	appr. 7

Suggested curing conditions: room temperature, +5°C-+25°C, 45-55 % RH *

* **Attention!** In case of humidity higher than 55-60 % bubbles may arise in castings.

Properties of the hardened material:

CHARACTERISTICS	STANDARD	UNIT	VALUE
Tensile strength	ISO 527-2	N/mm ²	>7
Elongation at break	ISO 527-2	%	>25
Flexural strength	ISO/ R178	N/mm ²	min. 10
Shore D hardness 15s	ISO 868	-	20 - 25
Shore A hardness, 15 s	ISO 868	-	70 - 75
Water absorption (25 °C, 24 hours)	ISO 62	%	0,15
Thermal conductivity	DIN VDE 0304	W/m·K	> 0,50
Specific volume resistivity	IEC 93	Ω x cm	>10 ¹³
Specific surface resistivity	IEC 93	Ω	>10 ¹²
Dielectric strength (25 °C)	IEC 243	Kv/mm	>18
Flammability	UL-94	fokozat	V-0/4mm



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Information on application:

1. In case of manual application:

- During mixing the temperature of the components should be between 15-25 °C. At higher temperature the gel time shortens and the warming during bonding increases, that makes work more difficult.
- Casting process should be begun by preparing the workpieces in a quantity, that is casted with resin obtained by one mixing during max. 15 minutes.
- Component „A” should always be stirred up thoroughly before use to avoid possible sedimentation.
- Prescribed mixing ratio has to be respected at every mixing.
- After pouring together, the two components have to be mixed accurately till receiving absolute homogeneity.

2. In case of Automatic (powered) application:

- According to the machine specific instructions

For cleaning the tools and brushes Vilepox H-3 should be used.

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:** Give adequate ventilation to the premises where the product is stored and/or handled. 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 information is detailed in the „Safety data sheets” of the product.**

UL registration number: **E338747**

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-461/45 ENG 2.

September 2015.