



# TECHNICAL DATA SHEET

## VILEPOX®/VILTER® systems Vilepox® U-461/44 Soft, fire retardant PUR Casting Resin


### Temporary data sheet

#### Application:

A soft system for potting and casting of small and medium-sized transformers, capacitors, cable links 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 -30-130 °C
- soft type
- good dielectric properties
- good mechanical properties
- very good thermal-shock resistance
- good thermal conductivity
- available in natural and colour versions
- low viscosity, bubble free castings
- good processibility
- free of solvents and halogens

#### Specification of the components:

			VALUE	
CHARACTERISTICS	STANDARD	UNIT	VILEPOX U-461/44 component „A”	VILEPOX U-461/44 component „B”
Description	-	-	a special polyol with inorganic fillers*	polyisocyanate hardener
Appearance	HSZ 003	-	beige, viscous liquid **	brown transparent liquid
Density (25 °C)	HSZ 004 (ISO 1675)	g/cm <sup>3</sup>	1,52-1,56	1,20-1,22
Viscosity (25°C)	HSZ 010 (ISO 255)	mPas	6500-8500	20-50
Storage conditions	-	-	in a dry place far away from direct heat, in tightly closed containers at 5-25°C	
Storage stability	-	month	min. 6	min.6
Packaging ***	-	kg	metal can of 30	metal can of 4,8
Flammability	-	grade	III.	III.

\* Sedimentation may occur

\*\* On special request other colours are also available.

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## Specification of the mixture:

Mixing ratio: **VILEPOX U-461/44 component „A”** 100 parts of mass (kg)  
**VILEPOX U-461/44 component „B”** 16 parts of mass (kg)

CHARACTERISTICS	STANDARD	UNIT	VALUE
Gel time (25°C, 100 g)	HSZ 001	minutes	40-60
Density (25 °C)	ISO 1675	g/cm <sup>3</sup>	1,47-1,52
Initial viscosity (25 °C)	ISO 2555	mPas	2500-3500
Potlife: Time of doubling of viscosity (25°C, 50 g)	ISO 2555	minutes	appr. 10
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 <sup>2</sup>	>4,5
Elongation at break	ISO 527-2	%	>60
Flexural strength	ISO/ R178	N/mm <sup>2</sup>	min. 10
Shore D hardness 15s	ISO 868	-	40-45
Water absorption (25 °C, 24 hours)	ISO 62	%	0,15
Specific volume resistivity	IEC 93	Ω x cm	>10 <sup>13</sup>
Specific surface resistivity	IEC 93	Ω	>10 <sup>12</sup>
Dielectric strength (25 °C)	IEC 243	Kv/mm	>18
Flammability	UL-94	grade	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.
- For cleaning the tools and brushes Vilepox H-3 should be used.

### **2. In case of Automatic (powered) application:**

- According to the machine specific instructions

## **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.

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Vilepox U-461\_44 ENG 1