



# TECHNICAL DATA SHEET

## VILEPOX<sup>®</sup>/VILTER<sup>®</sup> systems Vilepox<sup>®</sup> PBU-101 potting/encapsulating resin system

### Temporary data sheet

#### Application:

Two- component, unfilled modified polybutadiene system hardening at room temperature.

Suitable for potting/encapsulation of small and medium-voltage devices, transformers, capacitors, windings etc. Especially good for such applications where wide range of thermal shock, vibration, water and chemical resistance are required.

Due to its high flexibility it is easily removable from potted device.

#### Characteristics:

- high flexibility
- „B” heat class, working temperature -50 - 130 °C
- good dielectric properties
- very good thermal-shock resistance
- very good flexibility
- good water and chemical resistance
- available in natural and coloured versions
- low viscosity, bubble free castings
- good processibility
- solvent free
- halogene free
- satisfies the requirements of RoHS

#### Specification of the components:

			VALUE	
CHARACTERISTICS	STANDARD	UNIT	VILEPOX PBU-101 component „A”	VILEPOX PBU-101 component „B”
Description	-	-	a special poliol with water scavenger*	polyisocyanate hardener
Appearance	HSZ 003	-	greyish- white liquid **	brown transparent liquid
Density (25 °C)	HSZ 004 (ISO 1675)	g/cm <sup>3</sup>	0,92-0,97	1,18-1,22
Viscosity (25°C)	HSZ 010 (ISO 2555)	mPas	2000-2600	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	30	7,5
Transport	-	-	metal can	metal can
Inflammability	-	grade	III. (flammable)	III. (flammable)

\* Sedimentation is allowed, but easy to stir

\*\* Other colours are also available on request

\*\*\* Other packaging is also available on request



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## Specification of the mixture:

Mixing ratio: **VILEPOX PBU-101 component „A”** 100 parts of mass (kg)  
**VILEPOX PBU-101 component „B”** 25 parts of mass (kg)

CHARACTERISTICS	STANDARD	UNIT	VALUE
Gel time (25°C, 100 g)*	Gelnorm	minutes	220 - 270
Density (25 °C)	HSZ 004 (ISO 1675)	g/cm <sup>3</sup>	0,95-1,00
Initial viscosity (25 °C)	HSZ 010 (ISO 2555)	mPas	1000-1800
Potlife: (25°C, 50 g) Time of doubling of viscosity Time of tripling of viscosity Time to reach 15 000 mPas	HSZ 010 (ISO 2555)	minutes	appr. 30 appr. 54 appr. 80
Hardening time at room temperature	-	hours	appr. 24
Full hardening at room temperature	-	days	appr. 7

\* On special request shorter gelation times are also available e.g.: Vilepox PBU-101 (g 80): 80 min, ect.

**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>	5
Elongation at break	ISO 527-2	%	>50
Srinkage after curing	-	%	>0,55
Shore-hardness A, 15 s	ISO 868	-	40-55
Shore-hardness D, 15 s	ISO 868	-	10-20
Water absorption (25 °C, 4 days)	ISO 62	%	< 0,5
Thermal conductivity	ISO 8894-1	W/mK	0,23
Dielectric constant, 50 Hz, 25°C-on	IEC 60250	ε	3,3
Dissipation factor, 50 Hz, 23°C-on	IEC 60250	tg δ	0,016
Tracking resistance	IEC 60112-11/03	-	CTI 600
Volume resistance	IEC 93	Ω x cm	>10 <sup>13</sup>



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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.
- Casting process should be begun by preparing the workpieces in a quantity, that is casted with resin obtained by one mixing within potlife (doubling of viscosity).
- 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 application:**

- According to the machine specific instructions.

- For cleaning the tools and brushes Vilepox H-5 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 components.**

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.

January, 2016

Vilepox PBU-101 ENG 2