



TECHNICAL DATA SHEET

VILEPOX®/VILTER® systems

Vilepox® PBU-102 fire retardant potting/encapsulating resin system

Field of application: Two- component, polybutadiene modified system hardening at room temperature. Fire retardant, V-0 / 4 mm according to UL 94.

Suitable for potting/encapsulation of small and medium-voltage devices, transformers, capacitors, windings etc. Especially good for 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:

- fire retardant, V-0/4mm according to UL 94
- high flexibility
- „B” heat class, working temperature -50 - 130 °C
- good dielectric properties
- very good thermal-shock resistance
- good flexibility even at very low temperature, at – 50 °C
- good water and chemical resistance
- available in natural and colour versions
- low viscosity, bubble free castings
- good processibility
- satisfies the requirements of ROHS

Specification of the components

CHARACTERISTICS	STANDARD	UNIT	VALUE	
			VILEPOX PBU-102 component „A”	VILEPOX PBU-102 component „B”
Description	-	-	a special polyol with inorganic fillers*	polyisocyanate hardener
Appearance	HSZ 003	-	greyish white, viscous liquid**	brown transparent liquid
Density (25 °C)	HSZ 004 (ISO 1675)	g/cm ³	1,40 – 1,44	1,20 – 1,24
Viscosity (25°C)	HSZ 010 (ISO 2555)	mPas	7000 - 10000	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	3
Transport	-	-	metal can	metal can
Inflammability	-	grade	III.	III.

* Sedimentation is allowed

** On request other colours are also available.

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Specification of the mixture

Mixing ratio: VILEPOX PBU-102 component „A” 100 parts of mass (kg)
VILEPOX PBU-102 component „B” 10 parts of mass (kg)

CHARACTERISTICS	STANDARD	UNIT	VALUE
Gel time (25°C, 100 g)*	HSZ 001	minutes	300 - 420
Density (25 °C)	HSZ 004 (ISO 1675)	g/cm ³	1,38 - 1,42
Initial viscosity (25 °C)	HSZ 010 (ISO 2555)	mPas	3000 - 4500
Potlife: (25°C, 50 g) Time of doubling of viscosity Time of tripling of viscosity	HSZ 010 (ISO 2555)	minutes	45 - 55 60 - 70
Hardening time at room temperature	-	hours	appr. 24
Full hardening at room temperature	-	days	appr. 7

* On request shorter gelation times are also available e.g.: Vilepox PBU-102 (g 100): 100 min, etc.

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
Thermal conductivity	DIN VDE 0304	W/m·K	> 0,40
Tensile strength	ISO 527	N/mm ²	> 7
Elongation at break	ISO 527	%	>25
Shore A hardness 15s	ISO 868	-	60-70
Shore D hardness 15s	ISO 868	-	15-20
Water absorption (25 °C, 24 h)	ISO 62	%	< 0,2
Specific volume resistivity	IEC 93	Ω x cm	>10 ¹³
Specific surface resistivity	IEC 93	Ohm	>10 ¹²
Dielectric strength (at 25°C)	IEC 243	kV/mm	>18
Flame retardancy	UL 94	grade	V0/4mm



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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.

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 during pot life (Time of tripling 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.
- For cleaning the tools and brushes Vilepox H-5 should be used.

2. In case of Automatic (powered) application:

- According to the machine specific instructions

If you have any further questions regarding this system do not hesitate to contact us.

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 PBU-102 ENG 2
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