



# TECHNICAL DATA SHEET

## VILEPOX<sup>®</sup> UHF-1

A two-component, elastic casting resin system hardening at room-temperature

### Application:

A system used for making elastic potting of electromagnets, transformers, capacitors and for elastic castings. Good for making large castings as well, depending on the shape and construction upto 100-kg mass of resin.

### Characteristics:

- Excellent and durable mechanical resistance and elasticity at room temperature
- Mechanical resistance and elasticity hardly changes upto appr. 140°C.
- Excellent resistance to low temperature upto -40°C
- Excellent dielectric properties from -40°C upto + 120 °C.
- Excellent thermal shock resistance
- Good thermal conductivity
- Low reactivity, castings hardly warm up during bonding
- Good application properties

### Technical properties of the components:

	Vilepox <sup>®</sup> UHF-1 „A”	Vilepox <sup>®</sup> UHF-1 „B”
<b>Description</b>	A special mixture of oligomer free of solvents with pigments and fillers.	A special, polyamin based hardener with inorganic fillers
<b>Appearance</b>	coloured liquid*	viscous liquid
<b>Density, g/cm<sup>3</sup> 25 °C</b>	1,04 – 1,18	2,30-2,37
<b>Viscosity at 25 °C, mPas</b>	5000-9000	4000-6000
<b>Non-volatile matter content, %:</b>	> 99,8	>99,8
<b>Flashpoint, °C</b>	> 180	> 170
<b>Shelf-live</b>	min. 9 months**	min. 9 months
<b>Storage</b>	in a dry room, far away from heating in original airtight containers at +5-+20 °C	
<b>Inflammability</b>	III. grade	III. grade
<b>Packaging</b>	metallic can	metallic can
<b>Dangerous disintegration products</b>	during burning toxic gases and vapours get generated e.g. carbon monoxide, carbon-dioxide, nitrogen oxides	

\* Regular range of colours: cc.RAL 3013 oxidred and cc. RAL 9017 black

\*\* sedimentation of fillers is allowed



# TECHNICAL DATA SHEET

## Specification of the mixture

### Mixing ratio:

VILEPOX UHF-1 component "A"

100 parts of mass (kg)

VILEPOX UHF-1 component "B"

50 parts of mass (kg)

	Properties of the mixture:
Geltime at 25 °C, 100 g, min	70-110
Density at 25°C, g/cm <sup>3</sup>	1,20 – 1,40
Initial viscosity at 25 °C, mPas	8000 – 15000
Potlife: Time till reaching double viscosity, 50 g, 25°C, min	appr. 20
Hardening time at room-temperature, hours	appr. 24
Time of full hardening at room-temperature, days	appr. 7
Suggested circumstances of hardening	room-temperature: +5°C-+25°C humidity : 50-60 % *

	Properties of the hardened material
Tensile strength, N/mm <sup>2</sup>	appr. 9
Elongation at break, %	min. 200
Shore A hardness, 15 s	81-87
Shore D hardness, 15 s	29-32
Specific volume resistance, Ωcm	min.10 <sup>12</sup>
Specific surface resistance, Ω	min.5x10 <sup>12</sup>
Loss factor tgδ, 1 kV, at 25°C	appr. 450x10 <sup>-4</sup>
Loss factor tgδ, 3 kV, at 120°C	appr. 480x10 <sup>-4</sup>

## 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.**



# TECHNICAL DATA SHEET

---

## **Information on 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 can be casted with resin obtained by one mixing within appr. max. 20 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.
- Mixture should be used within potlife. Material of increased viscosity or with begun gelling must not be used.
- For cleaning the tools and brushes Vilepox H-3 should be used.

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.

September 2014.

Vilepox UHF-1 ENG 3.