



TECHNICAL DATA SHEET

VILEPOX® U-234

A fire-retardant casting resin system hardening at room-temperature

Application:

A fire-retardant system for potting and casting of small and medium-sized transformers, capacitors, cable links etc. Hardens at room-temperature.

Characteristics:

- good dielectric properties from -40 °C to +110 °C
- good mechanical properties and flexibility
- fire retardant V-0 / 4 mm
- free of halogens and solvents.
- good thermal-shock resistance
- good thermal conductivity
- excellent resistance to low temperatures (till -40 °C)
- good processibility

Specification of the components

	Vilepox® U-234 „A”	Vilepox® U-234 „B”
Characteristics	A special poliol with inorganic fillers	A special polyisocyanate hardener
Appearance	white liquid*	yellowish liquid
Density, g/cm ³ (at 25 °C)	1,59 – 1,61	1,20 – 1,22
Viscosity, mPas (at 25°C):	5000-10000	200 – 360
Non-volatile matter content, %	> 99,6	
Shelf-life	min. 6 months**	min. 6 months
Storage	in tightly closed, original containers at 5-25°C, in a dry place far from heaters	
Flammability	fire-retardant	III. grade
Packaging	metal cans	metal cans
Hazardous decomposition products	Carbon-monoxide, carbon-dioxide, nitrogen oxides and other toxic gases, vapours may occur when burning.	

*Standard range of colours: RAL 3013, RAL 6002, RAL 9016, RAL 9017

On request other colours are also available.

**As sedimentation of fillers may occur, the material has to be mixed thoroughly before use.

Specification of the mixture

Mixing ratio:

VILEPOX U-234 komponent „A”

100,0 parts of mass (kg)

VILEPOX U-234 komponent „B”

15,0 parts of mass (kg)



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	Properties of the mixture
Gel time, 100g, minutes (at 25 °C)	20-40
Density at 25°C, g/cm ³	1,51 – 1,57
Initial viscosity, mPas	5600-6400
Potlife: Till reaching double viscosity, 50 g, 25 °C, min Till reaching tripple viscosity, 50 g, 25 °C, perc	appr. 8 appr. 15
Hardening time at room-temperature, hours	appr. 24
Time of full hardening at room-temperature, day	appr. 7
Suggested conditions of hardening	room-temperature: +5°C-+25°C humidity: 45-55 % *

* **Notice!** In case of humidity higher than 65% bubbles may arise in castings, therefore application in such conditions is not recommended.

	Properties of the hardened material
Tensile strength , N/mm ²	appr.10
Elongation at break, %	min.80
Shore D hardness (after 7 days, 15 s)	34-38
Thermal conductivity λ , W/m*K	min. 0,52
Water absorbtion, at 25°C, %	<0,4
Specific volume resistivity, Ohmxc m	min 3x.10 ¹²
Specific surface resistivity, Ω m	min 6x.10 ¹¹
Dissipation factor, tg δ , 1 kV, at 25°C	450x10 ⁻⁴
Dissipation factor, tg δ , 3 kV, 120°C-on	480x10 ⁻⁴

(Tests should be done after a 7-day conditioning at room-temperature)

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 absorbtion should be disposed to a plastic container or sack.

Ventilation: The working place has to be ventilated 3-5 times an hour. 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 of 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.



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Information on application

- During mixing the temperature of the components should be between 20-25 °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. 10 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.

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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