




TECHNICAL DATA SHEET

VILEPOX® U-461/38 Soft, fire-retardant casting resin system

Application: A soft system for potting and casting of small and medium-sized transformers, capacitors, coils, electric parts, cable-jointings and endings etc. It gives the advantage of wide range of application.

Benefits:

- fire retardant V-0 / 4 mm , has UL certification 
- „B” thermal-class,
- good dielectric properties
- good mechanical properties
- very good thermal-shock resistance
- good thermal conductivity
- cold-resistant upto -40°C
- low reactivity and low release of heat
- very low viscosity before bonding, bubble free castings
- good processibility, good for both manual casting and casting with automatic mixer and feeder
- free of solvents and halogens
- available in natural and coloured versions too

Specification of the components:

	VILEPOX® U-461/38 „A”	VILEPOX® U-461/38 „B”
Characteristics	Special polyol with inorganic fillers	Special polyisocyanate hardener
Appearance	viscous liquid*	brown liquid***
Density, g/cm³ (at 25 °C)	1,52 – 1,58	1,19 – 1,22
Viscosity, mPas (at 25°C)	4000 – 7500	20 – 40
Non-volatile matter content, %	min. 99	min. 99
Shelf-life	min. 6 months**	min. 6 months
Storage	in a dry room, far away from heating in original airtight containers at +5-+20 °C	
Inflammability	III. grade	III. grade
Packaging	metallic can	metallic can
Dangerous disintegration products	during burning toxic gases and vapours get generated e.g. carbon monoxide, carbon-dioxide, nitrogen oxides	

*Standard range of colours: RAL 3013, RAL 6002, RAL 9016, RAL 9017 Other colours are possible on request.

**Sedimentation of fillers is allowed.

*** On request available in coloured version too.



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Specification of the mixture

Mixing ratio:

VILEPOX® U-461/38 component „A”	100,0 parts of mass (kg)
VILEPOX® U-461/38 component „B”	16,0 parts of mass (kg)

	Properties of the mixture
Gel time, 100g, minutes (at 25 °C)*	140-190
Density at 25 °C, g/cm³	1,48-1,52
Initial viscosity, mPas (at 25 °C)	1500-2500
Potlife: Time till reaching double viscosity, 50 g, 25 °C, min Time till reaching triple viscosity, 50 g, 25 °C, min	appr. 40 appr. 55
Outflow (Ford-cup-6, 25 °C, s)	30-70
Hardening time at room temperature, hours	appr. 24
Full hardening time at room temperature, days	appr. 7
Suggested circumstances of hardening	room temperature: +5°C-+25°C humidity: 45-55 % **

* On request shorter gel time is also possible (e.g. 60 min, 90 min)

** **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
Thermal conductivity, W/(mK)	0,70
Thermal diffusivity, mm²/s	0,42
Glass transition temperature (Tg), °C	8-11
Tensile strength , N/mm²	min 7
Elongation at break, %	min. 25
Bending strength, N/mm²	min. 10
Shore A hardness	81-86
Shore D hardness	40-45
Water absorbtion (at 25°C), 24 hours %:	0,15
Specific volume resistivity, Ohmxcm:	>10 ¹³
Specific surface resistivity, Ohm	>10 ¹²
Dielectric strength (at 25°C), kV/mm	>18
Combustibility, grade	V-0/4mm



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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

-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. 50 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.

UL registration no.: 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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