



TECHNICAL DATA SHEET

VILEPOX[®] KT-5 Outdoor baking resin system for casting

Field of application:

A baking system used for outdoor electroinsulating castings, transformers, voltage- and current transformers, isolators.

Characteristics:

- low viscosity
- good mechanical properties
- good chemical properties
- good dielectric properties
- excellent UV resistance
- excellent thermal resistance
- excellent flowing properties even in case of high content of fillers quartz flour.
- free of solvents

Technical properties of the components:

	Vilepox [®] KT-5 „A”	Vilter [®] KT-5 „B”	Vilter [®] D
Characteristics	A low viscosity, cycloaliphatic epoxy resin free of solvents.	Low viscosity liquid, a mixture of organic acidanhydride and additives.	accelerator based on liquide tertiary amine.
Appearance	yellowish, transparent liquid	colourless liquid	yellowish, transparent liquid
Density, g/cm³ at 25 °C	1,18 - 1,25	1,12-1,18	0,88-0,92
Viscosity, mPas at 25 °C	500-1000	50-150	4- 15
Outflow (Mp-6, 25 °C,s)	55-75		
Flash-point, °C	>165	min.162	54
Non-volatile matter content, %	min. 99,8		
Epoxy equivalent, g/mol	165-175		
Anhydride content, %		min. 95	
Shelf-life	min. 12 months	min. 12 months	min. 12 months
Storage	in a dry place, far away from heating in original airtight containers at +5-+20 °C		
Inflammability	III. grade	III. grade	III. grade



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Technical properties of the system:

Mixing ratio:

Vilepox KT-5 component „A”	100,0 parts by mass (kg)
Vilepox KT-5 component „B”	100,0 parts by mass (kg)
Vilter D	1,0 part by mass (kg)*
Quartz flour (silanized)	300,0 parts by mass (kg)

	Properties of the mixture
Initial viscosity, mPas (at 25 °C)	250-350
Geltime at 120°C, 100 g, min	15-30
Geltime at 80°C, 100 g, min	42-63
Density of the mixture at 25 °C, g/cm ³	1,15-1,20
Potlife:	
untill doubling of viscosity, 100g , 25 °C, hours	appr. 7
untill tripling of viscosity, 100g , 25 °C, hours	appr. 14

	Properties of the hardened material
Curing circumstances	2 hours/100°C + 16 hours/140°C***
Density at 25 °C, g/cm ³	1,7-1,8
Bending strength, N/mm ²	150-165
Impact strength, kJ/mm ²	8-9
Tensile strength , N/mm ²	90-100
Elongation at break, %	1,7-1,9
Elastic modulus at tearing, N/mm ²	10000-11000
Heat distortion temperature , HDT, °C	95-105
Linear coefficient of thermal expansion, 10 ⁻⁶ /K	35-50
Water absorption, at 25°C, %: (50x50x4 mm-es próbatest, 10 nap)	0,1-0,2
Dielectric strength at 25°C, kV/mm	19-22
Dissipation factor, tg u (50 Hz) at 25°C %	2
Arc resistance, s	185-190

*The quantity of the accelerator and the curing conditions may be different, and then the technical properties may also vary accordingly.

** For perfect wetting and outdoor resistance silanized quartz flour should be used, e.g. produced by Quarzwerke GmbH Sibond W12 EST. The proportion of the resin and quartz flour may vary depending on the type of quartz flour.

*** The actually necessary curing time is longer by the time needed for warming up the work-pieces. The curing time should be determined individually for each element, depending on its size, shape, specific weight and dryer type.



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Safety Precautions

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. Afterward it has a protective cream has to be used. The dirty paper or clothes used for absorption 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 into 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.

This brochure was compiled according to our best knowledge, but no legal obligation can be based on its content.

Vilepox KT-5 ENG 3.

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