



TECHNICAL DATA SHEET

VILEPOX TC-24 Casting resin system

Application:

Hot curing casting resin system mainly for castings of small to large sizes e.g. large dry transformers, insulators, voltage and current transformers etc. It can also be used for lamination.

Features:

- for production of castings of all size
- excellent dielectrical properties
- excellent mechanical properties
- excellent thermal conductivity
- excellent thermal-shock resistance
- good resistance to low temperature

Technical properties of the components:

	Vilepox® TC-24 „A”	Vilepox® TC-24 „B”	Vilter® Z
Charakteristics	Modified epoxy resin of low viscosity, free of solvents.	Low viscosity anhydride based hardener for hot curing	Low viscosity solventless, tertiary-amine based accelerator
Appearance	clean, viscous liquid	colourless, transparent liquid	yellowish liquid with unpleasent odour
Density, g/cm ³ at 25 °C	1,14-1,18	1,15-1,17	0,96-1,00
Viscosity, mPas at 25 °C	9 000-15 000	40-90	180-270
Flash-point, °C	>200	150	appr. 107
Outflow (Cup-3, 25°C, s)		30-50	120-170
Non-volatile matter, %	>99,8	>99,8	-
Epoxy equivalent weight g/ekv		185-205	
Epoxi ekvivalens, g/mol	178-198	-	-
Amine no. (mgKOHg)			631
Storage	In a dry place and in the tightly closed original containers at +5 - +20 °C. Keep away from light and heat radiation.		
Shelf-life	min. 12 months	min. 12 months	min. 12 months
Packaging	metallic can or drum	metallic can or drum	metallic can
Inflammability	III. grade	III. grade	III. grade



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Mixing ratio:

VILEPOX TC-24 Component „A”	100 parts by mass (kg)
VILEPOX TC-24 Component „B”	100 parts by mass (kg)
VILTER Z	0,7 parts by mass (kg)*

	Technical properties of the system
Initial viscosity, at 25 °C , mPas	350-500
Density, at 25 °C , g/cm³	1,14-1,18
Density with quartz flour, at 25°C, g/cm³ 100 „A” + 100 „B” + 0,7 Vilter Z + 380 quartz flour	1,80-1,85
Potlife: Time of doubling of viscosity, 100g, 25 °C, hours Time of doubling of viscosity, 100g, 60 °C, hours Time of tripling of viscosity, 100g, 25 °C, hours Time to reach 15000 mPas, 100g, 25°C, hours	appr. 18 appr. 4 appr. 29 appr. 101
Geltime, 80°C, 100g, min	90-108
Geltime, 100°C, 100g, min	45-63
Geltime, 120°C, 100g, min	27-39

Curing: 90°C 4 hours + 150°C 6 hours *

*Curing conditions and the amount of the accelerator may be changed. In this case all technical properties may be different.

	Properties of the hardened material
Bending strength, N/mm²	min. 90
Impact strength, kJ/mm²	min 6
Tensile strength, N/mm²	min 35
Modulus of flexibility, N/mm²	2350-2450
Martens temperature, °C	min 85
Coefficient of thermal expansion, 10⁻⁶/K	60-70
Vízfelvétel, 25°C-on, %	max. 0,2
Dielectric strength at 25°C, kV/mm	min. 12
Specific surface resistance, ohm	min. 10 ¹⁵
Specific volume resistance, ohm x cm	min. 10 ¹⁴
Permittivity , 50 Hz	3,5
Permittivity , 10⁶ Hz	3,3
Dissipation factor, tg , 50 Hz	0,005
Dissipation factor, tg , 10⁶ Hz	0,025



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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. 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.

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Vilepox TC-24 ENG 4.



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