TECHNICAL DATA SHEET

VILEPOX®/VILTER® systems
VILEPOX® EG-55/828
potting and casting resin system

Temporary data sheet

Application:
A two-component, fire-retardant, highly reactive epoxy system hardening at room temperature without solvents for casting and potting of parts of different size.

Characteristics:

- fire-retardant, V-0 type according to UL-94
- with UL certification
- „B" thermal class type
- potted/encapsulated device is movable within very short time
- excellent mechanical properties
- excellent chemical properties
- excellent dielectric properties
- good thermal conductivity
- good thermal resistance
- convenient application features both manually and power-driven application
- solvent and halogene free system
- satisfies the requirements of RoHS

Specification of the components:

	VILEPOX EG-55/828 component „A"	VILEPOX EG-55/828 component „B"		
CHARACTERISTICS	**VALUE**		**UNIT**	**STANDARD**
Description	mixture of modified epoxy resin and fillers*	modified cycloaliphatic polyamine	-	-
Appearance	light-grey or coloured liquid**	yellowish-brown, clear transparent liquid	-	HSZ 003
Density at 25 °C	1,72 - 1,78	0,95 - 1,00	g/cm^3	HSZ 004 (ISO 1675)
Viscosity at 25°C	10000 - 16000	200 - 400	mPas	HSZ 010 (ISO 2555)
Solid content	> 99,8	> 99	%	ISO3251:2003
Flash point	>165	>100	°C	ASTM D93
Storage conditions	in tightly closed, original containers at 15-25 °C, in a dry place far from heaters			
Storage stability	12	12	month	-
Packaging* **	30	5,4	kg	-
Transport	metal can	metal can	-	-
Inflammability	III. (flammable)	III. (flammable)	class	-

*As sedimentation of fillers may occur, the material has to be mixed thoroughly before use.
** Other colours are also available on request.
***Other packaging are also available on request.

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Specification of the mixture:

Mixing ratio: **VILEPOX EG-55/828 component „A”** **100 parts of mass (kg)**
VILEPOX EG-55/828 component „B” **18 parts of mass (kg)**

CHARACTERISTICS	VALUE	UNIT	STANDARD
Gel time at 25°C, 100 g	8 - 15	minute	HSZ 001
Density at 25 °C	1,59 - 1,64	g/cm^3	HSZ 004 (ISO 1675)
Initial viscosity at 25 °C	3500 - 6500	mPas	HSZ 010 (ISO 2555)
Potlife: **Doubling of viscosity, 100 g, at 25 °C** **Tripling of viscosity, 100 g, at 25 °C**	 appr. 5 appr. 8	minute	HSZ 010 (ISO 2555)
Hardening time at 25 °C	15 - 45	minute	ISO 868
Complete hardening time at 25 °C	7	day	ISO 868

Specification of the hardened material:

CHARACTERISTICS	VALUE	UNIT	STANDARD
Shore D	88 - 93	-	ISO 868
Glass transition temperature, Tg (DSC)	50 - 60	°C	ISO 11357-2
Martens value	45 - 55	°C	DIN 53458
Dielectric strength at 25°C	> 18	Kv/mm	IEC 243
Surface resisitivity	> 10^{15}	Ω (Ohm)	IEC 93
Volume resisitivity	> 10^{14}	Ω x cm	IEC 93
Dielectric constant, ε, 20 V, 800 Hz, at 25°C	4,6 - 5,1	-	IEC 60250
Compressive strength	> 28	N/mm^2	ISO 604
Bending strength	> 32	N/mm^2	ISO 178
Tensile strength	> 15	N/mm^2	ISO 527
Elongation at break	2	%	ISO 527
Thermal conductivity, λ	0,72	W/(m·K)	DIN VDE 0304
Water absorption after 3 days at 25 °C	0,1 - 0,15	%	IEC 60062
Linear thermal expansion coefficient, α_L (25-100 °C)	95	10^{-6}/K^{-1}	ASTM E831-14
Dissipation factor, tg δ (20V, 800 Hz, at 25°C)	0,065	-	IEC 60250
Tracking resistance	CTI 1000	-	IEC 60112-11/03
Flame retardancy, 6 mm thickness	V-0	grade	UL 94

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Information on application:

1. In case of manual application:

- During mixing the temperature of the components should be between 15-25 °C.
- Casting process should be begun by preparing the workpieces in a quantity, that is casted with resin obtained by one mixing within potlife (doubling of viscosity). **Attention!** The pot life is only 6 minutes so the time of application is very short!
- 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.

2. In case of automatic application:
   - According to the machine specific instructions.

For cleaning the tools and brushes Vilepox H-1 should be used.

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**: 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 shoud 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 components.**

UL registered number: **E338747**

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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