KORAX Kft.

TECHNICAL DATA SHEET

Vilepox® CNP-5
Cable jointing resin-system

Field of application:

A low-viscosity, two-component epoxy resin system of excellent heat-resistance , hardening at room-temperature. It is excellent for cable-jointings and endings, and for casting and potting of small parts. It combines good application properties with excellent features of the hardened material.

Characteristics:

- favourable application properties
- excellent mechanical properties
- good chemical properties
- excellent dielectric properties
- good thermal resistance
- a system free of solvents
- excellent wetting properties
- good flowing porperties even in case of high filler-content

Specification of the components

	Vilepox® CNP-5 „A"	Vilepox® CNP-5 „B"
Characteristics:	Modified epoxy resin of medium viscosity, free of solvents	A low-viscosity , organic poliamino-amids based hardener of medium reactivity, reacting at room-temp., free of solvents.
Appearance:	yellow, viscous liquid	blue, thin liquid
Density at 25 °C, g/cm3	1,12 - 1,15	0,94-0,98
Viscosity at 25°C, mPas	2800-4400	100-500
Flashpoint, °C		> 300
Boilingpoint, °C		> 200
Non-volatile matter content %	99,8	99,8
Shelf-life	min. 12 months**	min. 12 months
Storage	in tightly closed, original containers at 5-20°C, in a dry place far from heaters	
Flammability	III. grade	III. grade

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

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Specification of the mixture

Mixing ratio:

VILEPOX® CNP-5 component „A”	**100 parts of mass (kg)**
VILEPOX® CNP-5 component „B”	**50,0 parts of mass (kg)**

	Properties of the mixture:
Gel time at 25°C, 100g, min	15-33
Density of the mixture, g/cm^3 at 25 ºC	0,99-1,13
Initial viscosity at 25 °C, mPas	600-1500
Potlife: time till reaching double viscosity (50g, 25°C, min)	appr. 15
Hardening time at room temperature, hours	appr. 24

	Properties of the hardened material:
Density (at 24 °C), g/cm^3	0,99-1,13
Shore D hardness (after 7 days, 15 s)	77-82
Bending strength, N/mm^2	min. 80
Impact-bending strength, kJ/mm^2	min. 10
Tensile strength, N/mm^2	min. 40
Water absorbtion at 25°C, %	max. 0,4
Martens value *, °C	min. 50
Dielectric strength at 25°C-on kV/mm	min. 18
Specific surface resistivity Ohm	min. 10^{14}
Specific volume resistivity Ohmxcm	min. 10^{14}

Tests should be done at least after the 7-day conditioning at room temperature.
*Martens-value can be increased by post-curing (e.g. 80°C/1 hour)

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 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.
Eye-protection: Attention! Due to its alkalinity component „B” of Vilepox CNP-5 is especially dangerous for eyes. Therefore using protective glasses is a must.
First-aid: In case the material gets into 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.

The hardened material is physiologicaly not harmful. 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 both viscosity and gel time decrease, while warming during bonding increases. At lower temperature viscosity and gel time increases, warming during bonding decreases.
- Prescribed mixing ratio has to be respected at every mixing.
-The components have to be mixed accurately till receiving absolute homogeneity and applied as soon as possible.
-Casting process should be begun by preparing the workpieces in a quantity, that can be casted with resin obtained by one mixing within max. 15 minutes (at room temp.).
-Mixture should be used within potlife. Material of increased viscosity or with begun gelling must not be used.
-The resin-system hardenes at room-temperature, buti t reaches its final, excellent properties after appr. 1 week.
-Jointig the cables:

1. pull the plastic covering over one of the cables that have to be joint
2. link the cores of the two cables
3. pull the covering to the middle
4. cast it with the resin.

- For cleaning tools and brushes Vilepox H-3 should be used.

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