Electro Casting Resins | Adhesives

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Technical Datasheet

WEVOPUR PD 4

Two-component unfilled encapsulating system based on polyurethane.

This system exhibits outstanding chemical resistance against most common acids and alkali solutions and an excellent flexibility at low temperatures.

The product processes a very low and stable dielectric constant over a wide variety of frequencies and broad temperature range. Additionally it shows very good adhesion to most plastic materials, metals and glass.

Temperature range of use: -60°C to +120°C .

The casting resin is used with **WEVONAT 385**

Applications: Encapsulation and coating of pressure sensitive electrical and electronic components, e.g. sensors, SMD-equipped PCBs.

Product Specification:

Mixing ratio:	by weight: 100 parts WEVOPUR PD4:	
	34 parts WEVONAT 385	
Viscosity (22°C):	WEVOPUR PD4:	3.200 - 4.500 mPa·s
	WEVONAT 385:	15 - 35 mPa·s
	Mixture:	1.200 - 1.600 mPa·s
Density (22°C):	WEVOPUR PD4:	0,91 - 0,93 g/cm³
	WEVONAT 385:	1,20 - 1,24 g/cm³
Colour:	WEVOPUR PD4:	black or as requested
	WEVONAT 385:	yellowish
Pot life (200g):	30 minutes	at room temperature
	The curing time depends on the temperature, the potlife, the thickness of the layer and the casting volume.	
Curing time:	12 - 24 hours	at room temperature
Final hardness:	14 days	at room temperature

It is possible to accelerate the potlife and curing time as requested.

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Physical Properties:

		Test specification:
Shore-hardness A:	70 - 78	ISO 868, DIN 53505
Tensile strength:	9 N/mm²	ISO 527-2
Elongation at break:	210 %	ISO 527-2
Modulus of elasticity:	15 N/mm²	ISO 527-2
Thermal conductivity:	0,22 W/m·K	ISO 22007-2:2008
Glass transition temperature:	-60 °C	TMA
Coefficient of Expansion:	56 ppm/K 211 ppm/K	< -60°C, TMA > -60°C, TMA
Thermal class:	E	IEC 60085
Shrinkage after curing:	0,6 %	
Water absorption:	0,2 %	after 30 days immersion
Flammability:	HB, 3mm	UL94

Electrical Properties:

Dielectric strength:	25 kV/mm	IEC 60243-1 VDE 0303, TI.2
Volume resistance: 23°C/50% r.h.	$4{,}2 \cdot 10^{14}$ Ω·cm	IEC 60093 VDE 0303, TI.30
Surface resistance: 23°C/50% r.h.	> 10^{16} Ω	IEC 60093 VDE 0303, TI.30
Dielectric constant ε: at 50 Hz, 23°C bei 1 kHz, 23°C bei 1 MHz, 23°C	 3,1 3,0 2,8	 IEC 60250 VDE 0303, TI.4
Dissipation factor tan δ : at 50 Hz, 23°C bei 1 kHz, 23°C bei 1 MHz, 23°C	 0,014 0,013 0,015	 IEC 60250 VDE 0303, TI.4
Comparative tracking index:	CTI 600	IEC 60112 VDE 0303, TI.1

Packaging: 5 kg, 10 kg and 25 kg-buckets 180 kg drums

Shelf life: in original closed cans or drums, dry storage between 15°C and 25°C, 6 months.

Storing conditions for WEVONAT 385:

WEVONAT 385 should be stored at +18°C to +25°C. Lower storage temperatures (16°C) should be avoided due to possible crystallisation. For the same reason the hardener has to be protected against freeze.