

WEVO-Casting Resin PD 445

Two-component unfilled encapsulating system based on polyurethane.

This highly flexible 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 **WEVO-Hardener 385**

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

Product Specification:

<u>Mixing ratio:</u>	by weight: 100 parts Casting Resin PD 445 20 parts Hardener 385		
<u>Viscosity (22°C):</u>	Casting Resin PD 445:	2.000 -	3.000 mPa·s
	Hardener 385:	15 -	35 mPa·s
	Mixture:	1.800 -	2.200 mPa·s
<u>Density (22°C):</u>	Casting Resin PD 445:	0,92 -	0,94 g/cm³
	Hardener 385:	1,20 -	1,24 g/cm³
<u>Colour:</u>	Casting Resin PD 445:	yellowish or as requested	
	Hardener 385:	yellowish	
<u>Potlife (70g):</u>	30 minutes	at room temperature	
	The curing time depends on the temperature, the potlife, the thickness of the layer and the casting volume.		
<u>Curing time:</u>	12 - 24 hours	at room temperature	
<u>Final hardness:</u>	10 - 14 days	at room temperature	

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

Physical Properties:

<u>Shore-Hardness A:</u>	25 - 30	ISO 868, DIN 53505
<u>Tensile strength:</u>	1 N/mm ²	ISO 527-2
<u>Elongation at break:</u>	140 %	ISO 527-2
<u>Modulus of elasticity:</u>	2 N/mm ²	ISO 527-2
<u>Thermal conductivity:</u>	0,2 W/m·K	ISO 8894
<u>Glass transition temperature:</u>	-65 °C	TMA
<u>Coefficient of Expansion:</u>	80 ppm/K 220 ppm/K	< -70°C, TMA > -60°C, TMA
<u>Thermal class:</u>	E	IEC 60085
<u>Shrinkage after curing:</u>	0,6 %	
<u>Water absorption:</u>	0,2 %	after 30 days immersion
<u>Flammability classification:</u>	HB	UL94

Electrical Properties:

<u>Dielectrical strength:</u>	20 kV/mm	IEC 60243-1 VDE 0303, TI.2
<u>Volume resistance:</u> 23°C/50% r.h.	$4,2 \cdot 10^{14} \Omega \cdot \text{cm}$	IEC 60093 VDE 0303, TI.30
<u>Surface resistance:</u> 23°C/50% r.h.	$> 10^{16} \Omega$	IEC 60093 VDE 0303, TI.30
<u>Dielectric constant ϵ:</u> at 50 Hz, 23°C	3,0	IEC 60250 VDE 0303, TI.4
<u>Dissipation factor $\tan \delta$:</u> at 50 Hz, 23°C	0,014	IEC 60250 VDE 0303, TI.4
<u>Comparative tracking index:</u>	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 WEVO-Hardener 385:

WEVO-Hardener 385 should be stored at +20°C to +25°C. Lower storage temperatures (15°C) should be avoided due to possible crystallisation. For the same reason the hardener has to be protected against freeze.

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