SynFlex Elektro GmbH Auf den Kreuzen 24 D-32825 Blomberg Germany Telefon +49-5235-968-0 E-Mail info@synflex.de



## WEVOPUR 7210 FL PU encapsulating system

Two-component encapsulating system based on polyurethane.

### **Attributes**

The resin component contains a mineral filler providing the material with self-extinguish properties. The resin contains no halogenated flame-retardants. The cured polymer exhibits tough properties. The product processes a high thermal distortion temperature.

Temperature range of use: -40 °C to +145 °C

Wevopur 7210 FL is used with hardener WEVONAT 507.

#### **Application**

Encapsulation of electrical components for medium and high voltage applications.

#### **Standards**

- Class B
- UL 94 V 0 (6 mm)
- UL File E 108835

#### **Delivery forms**

30 kg metal container and 250 kg barrel.

## Color

WEVOPUR 7210 FL: black (standard)

WEVONAT 507: brown

#### **Storage**

6 months in closed containers, dry storage at 15 to 25 °C.

Store resin (A component, polyol) and hardener (B component, Isocyanat) dry and at temperatures between 15 °C and 25 °C. Store on pallets or collecting tray and do not expose to draft. At temperatures below 15 °C the hardener can crystallise which can be seen by opacity and/or clumps/crystals (usually hardeners are clear, transparent liquids in spite of their dark brown colour). In this case the hardener should not be used anymore. At temperatures higher then 25 °C the sedimentation of fillers contained in the resin component is accelerated. As a consequence it is more difficult to prepare (stir) the resin.

### **Hardening**

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#### **Product datasheet** WEVOPUR 7210 FL PU encapsulating system Page 2

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- Pot life: 20-35 min at room temperature, depending on coat thickness and pouring volume.
- Curing time: 12-24 h at room temperature.
- Complete chemical curing: 10-14 days at room temperature
- High air moisture may lead to forming of bubbles. Reference value: the rel. air humidity should not exceed 40-60 %, depending on the product. To avoid a reaction of the surface curing should be in an air conditioned room, a container with low air moisture or in an oven. Elevated temperatures accelerate the curing. Curing temperature should not exceed 80 °C to avoid tensions of the resin.
- Final hardness of WEVOPUR 7210 FL will be attained after 7–14 days at room temperature. This process can be accelerated by post curing at 60-80 °C for 16-24 h. This is relevant for potted components subject o qualification tests. Electrical tests can usually be carried out straight after potting.

#### **Protection**

Observe the common protective measures acc. to EG safety data sheets and the data sheet M044 of the German Chemical Industry Association (BG Chemie) when using the liquid resin.

#### **Processing**

Our processing instructions please find here.

## Cleaning

Since the cured resin is practically insoluble, tools and equipment have to be cleaned in sufficient time.





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Mechanical	Unit of measure	Values	Test method
Shore-D-hardness		85-90	DIN ISO 48-4:2011-02
Tensile strength	N/mm²	54	ISO 527-2:2012-06
Elongation at break	%	2	ISO 527-2:2012-06
E module	N/mm²	5500	ISO 527-2:2012-06

Thermal	Unit of measure	Condition	Values	Test method
Thermal conductivity	W/m*K		0.55	DIN 22007-2:2008
Glass transition temperature	°C		85	TMA ISO 11359-2:2021-11
Coefficient of expansion	ppm/K	<70	54	TMA ISO 11359-2:2021-11
Coeficient of expansion	ppm/K	>100	151	TMA ISO 11359-2:2021-11
Thermal class			В	DIN EN 60085

Chemical	Unit of measure	Condition	Values	Test method
Water absorption	%	after 30 days storage	0.3	
Burning behavior		6 mm	V-0	UL 94

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Electrical	Unit of measure	Condition	Values	Test method
Dielectric strength	kV/mm		34	IEC 60243
Specific volume resistance	Ω*cm	at 23 °C / 50 % RH	10^14	DIN EN 62631-3-1:2016
Surface resistivity	Ω	at 23 °C / 50 % r.H.	10^17	DIN EN 62631-3-1:2016
Dielectric constant (AC, 23 °C, 50 Hz)			3.7	IEC 62631-2-1:2018-12
Dielectric constant; at 1 kHz, 23 °C			3.6	IEC 62631-2-1:2018-12
Dielectric constant ε at 1 MHz, 23 °C			3.5	IEC 62631-2-1:2018-12
Dielectric loss factor at (AC, 23 °C, 50 Hz)			0.01	IEC 62631-2-1:2018-12
Dielectric loss factor tan б at 1 kHz, 23 °C			0.007	IEC 62631-2-1:2018-12
Dielectric loss factor tan б at 1 MHz, 23 °C			0.014	IEC 62631-2-1:2018-12
Creep resistance			CTI 600	DIN EN 60112

Glowing wire test	Unit of measure	Condition	Values	Test method
Glowing wire test	°C	6 mm	960 / 825	IEC 60695-2-12/-13, GWFI/GWIT

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# **Product datasheet**

WEVOPUR 7210 FL PU encapsulating system Page 5

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Liquid phase	Unit of measure	WEVOPUR 7210 FL	WEVONAT 507	Resin-/hardener-mixture	Test method
Mixing ratio	weight-%	100	43		
Viscosity (22 °C)	mPas	7,000-8,500	10-40	400-600	
Density (22 °C)	g/cm³	1.53-1.57	1.20-1.24		





