SynFlex Elektro GmbH
Auf den Kreuzen 24
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WEVOSIL 22027 FL

Attributes

The resulting molding material is characterized by its excellent mechanical and elastic properties, as well as its good low-temperature flexibility in the temperature shock test. Recommended temperature range: -60 °C to +180 °C.
The resin is processed together with WEVOSIL 22027 FL B.

Application

Potting for batteries with regard to thermal runaway prevention.

Standards

- Temperature application range -60 °C - +180 °C
- UL 94 V1

Delivery forms

10 kg and 30 kg containers.

Color

WEVOSIL 22027 FL A: Natural
WEVOSIL 22027 FL B: Red

Storage

Polymer (A-component) and crosslinker (B-component) must be stored dry and at a temperature of 5 °C to 30 °C and not in the open air. The containers should be stored upright and not directly on the cold floor (floor temperature not below 5 °C). WEVOSIL 22027 FL has a shelf life of 6 months after production.
At temperatures above 25 °C, the settling of the fillers contained in the casting compound is accelerated. The potting compound is then more difficult to homogenize.

Hardening

- Pot life: 50 - 70 minutes at room temperature, depending on layer thickness and casting volume.
- Curing time: 6 hours at room temperature, 1 hour at 100 °C
- Final chemical curing: several days at room temperature

Curing notes:

- Excessive humidity has a damaging effect on the uncured compound. If necessary, curing should take place in an air-conditioned room, a container with low humidity or in an oven.
- Curing at an elevated temperature (50 - 100 °C) accelerates the curing reaction and can influence the

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adhesion of the potting compound to the walls of the component.

- The WEVOSIL 22027 FL casting compound reaches its final hardness after a few days at room temperature.
- After approx. 6 hours curing at room temperature (or 1 h @ 100 °C) approx. 90 - 95 % of the Curing takes place. To achieve the final hardness, post-curing can then be carried out for 2 hours at 165 - 180 °C. However, this last step is not absolutely necessary. After a few days, the casting compound reaches its final hardness even at room temperature (depending on the system).
- Electrical tests of the component quality can usually be carried out after the first curing (6 hours at room temperature or 1 h @ 100 °C).

Protection

Our products are intended solely for industrial use. For further details, please refer to the safety data sheet.

Processing

Our processing instructions please find here.

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General	Unit of measure	Condition	Value	Test method
Mixing ratio	weight-%		100:100	
Pot lilfe	min	25 °C	90-120	
Curing time	h	25 °C	6	
Curing time	h	100 °C	1	

Mechanical	Unit of measure	Condition	Value	Test method
Density	g/cm³	WEVOSIL 22027 FL A	1.18-1.22	
Density	g/cm³	WEVOSIL 22027 FL B	1.18-1.22	
Viscosity	mPas	WEVOSIL 22027 FL A / 22 °C	700-1300	
Viscosity	mPas	WEVOSIL 22027 FL B / 22 °C	700-1300	
Mixture viscosity		22 °C	700-1300	
Hardness	Shore A		25-35	ISO 48-4
Water absorption	%	30 d / RT	<0.5	
Elongation at break	%		100	ISO 527-2

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Thermal	Unit of measure	Condition	Value	Test method
Thermal class			H	DIN EN 60085
Glass transition temperature	°C		-46	TMA
Thermal conductivity	W/m*K		0.3	ISO 22007-2:2008

Electrical	Unit of measure	Condition	Value	Test method
Dielectric strength	kV/mm		>25	DIN EN 60243
Dielectric constant ε at 50 Hz, 23 °C			3.35	DIN EN 60250
Dielectric constant; at 1 kHz, 23 °C			3.16	DIN EN 60250
Dielectric constant ε at 1 MHz, 23 °C			3.07	DIN EN 60250
Volume resistance specific at 23 °C, 50 % r.h.	Ωxcm		>10^14	DIN EN 62631-3-1:2016
Surface resistivity at 23°C and 50 % r.h.	Ω		>10^14	DIN EN 62631-3-1:2016

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