

Thermal Conductivity

Resin 8520/30 (ex FR 130) + Hardener 8930 (ex 3000)

- 2-components polyurethane casting resin
- solvent-free and electrically insulating
- very high thermal conductivity
- no metallic fillers
- excellent adhesive properties
- no halogenated flame-retardants
- ideal for heat-reduction of winding goods, electric motors, accumulators, and high-performance components
- TIP: Design variations of effective cooling elements, good combination with Kisling's LED-casting resins

Product specification:

Mixing ratio (weight):	Resin 8520	100 parts
	Hardener 8930	9 parts
Viscosity (22°C): (At 10 rpm)	Resin 8520	150'000 – 200'000 mPa·s
	Hardener 8930	450 – 750 mPa·s
	Mixing viscosity	110'000 – 130'000 mPa·s
Viscosity (40°C): (At 10 rpm)	Resin 8520	90'000 – 110'000 mPa·s
	Mixing viscosity	50'000 – 70'000 mPa·s
Density (22°C):	Resin 8520	2.10 – 2.30 g/cm ³
	Hardener 8930	1.10 – 1.15 g/cm ³
Colour:	Nature (cream)	
Pot life (40°C):	15 – 25 minutes	
	The curing time depends on the thickness of the layer, the casting volume and the temperature.	
Curing time (22°C):	16 – 30 hours	
Final hardness	10 – 14 days	

Physical properties:

Shore-Hardness:	D 35 – 45	ISO 868, DIN 53505
Thermal conductivity:	3.5 W/(m·K)	DIN EN ISO 22007
Glass transition temperature:	-23.3 °C	TMA
Coefficient of expansion:	156.2 ppm/K	< T _g , TMA
	187.9 ppm/K	> T _g , TMA
Shrinkage after curing:	<1 %	
Water absorption:	0.4 % (30 days at 23°C)	
Insulation class:	B	IEC 60085
Operating temperature:	-40°C up to +130°C	

Electrical properties:

Dielectrical strength:	28 kV/mm	IEC 60243-1, VDE 0303, TI.2
Volume resistance:	10 ¹⁵ Ω·cm (23°C/ 50% r.F.)	IEC 60243-1, VDE0303, TI.30
Surface resistance:	10 ¹⁶ Ω (23°C/ 50% r.F.)	IEC 60243-1, VDE0303, TI.30
Dielectric constant (ε _r):	at 50 Hz, 23 °C	5.5
	at 1 KHz, 23 °C	4.5
	at 1 MHz, 23 °C	3.9
Dielectric dissipation factor: (tan δ)		IEC 60250, VDE 0303, TI.4
	at 50 Hz, 23 °C	0.09
Coparative Tracking Index:	CTI 600	IEC 60112, VDE 0303, TI.1

Shelf life: 6 months in sealed original containers when stored in dry conditions (15°C to 25°C).

Packaging: Resin and hardener are offered in separate packaging units.

RoHS: We hereby certify that all our products are unexceptional RoHS conform, according to the EU directive 2011/65/EG (RoHS2) and the amendment of Directive 2015/863.

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