

Thermal Conductivity

Resin 8503/30 (ex FR22) + Hardener 8901 (ex 1001)

- 2-components polyurethane casting resin
 - solvent-free system 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
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Product specification:

Mixing ratio (weight):	Resin 8503 Hardener 8901	100 parts 8 parts
Viscosity (22°C): (At 10 rpm)	Resin 8503 Hardener 8901 Mixing viscosity	45'000 – 50'000 mPa·s 160 – 240 mPa·s 5'800 – 6'500 mPa·s
Density (22°C):	Resin 8503 Hardener 8901	2.45 – 2.55 g/cm ³ 1.20 – 1.25 g/cm ³
Colour:	Nature (beige)	
Pot life:	25 – 35 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 40 – 50	ISO 868, DIN 53505
Thermal conductivity:	1.5 W/(m·K)	DIN EN ISO 22007
Glass transition temperature:	10.0 °C	TMA
Coefficient of expansion:	72.5 ppm/K 141.7 ppm/K	< T _g , TMA > T _g , TMA
Shrinkage after curing:	<1 %	
Water absorption:	0.2 % (30 days at 23°C)	
Insulation class:	F	IEC 60085
E-Modulus	65	DIN EN ISO 527-2
Tensile Strength	4 N/mm ²	
Elongation at break	25 %	
Operating temperature:	-50°C up to +160°C	
Flammability classification:	V-0 in 4.0 mm	

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	5.6	IEC 60250,
at 1 KHz, 23 °C	4.5	VDE 0303, TI.4
at 1 MHz, 23 °C	3.9	
Dielectric dissipation factor: (tanδ)		IEC 60250,
at 50 Hz, 23 °C	0.09	VDE 0303, TI.4
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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