

## Thermal Conductivity

### Resin 8500/30 (ex TC 51) + Hardener 8973 (ex 1073)

- 2-components polyurethane casting resin
- solvent-free system
- semi-hard curing degree
- no halogenated flame-retardants
- self-extinguishing properties
- high thermal conductivity
- electrically insulating
- excellent adhesive and shock-resistant properties
- ideal for electronic components, e.g. sensors, lithium-ion batteries and transformers

#### Product specification:

Mixing ratio (weight):	Resin 8500	100 parts
	Hardener 8973	12 parts
Viscosity (22°C): (at 10 rpm)	Resin 8500	4'500 – 5'800 mPa·s
	Hardener 8973	15 – 35 mPa·s
	Mixing viscosity	1'400 – 2'400 mPa·s
Density (22°C):	Resin 8500	1.40 – 1.50 g/cm <sup>3</sup>
	Hardener 8973	1.20 – 1.25 g/cm <sup>3</sup>
Colour:	Nature (beige)	
Pot life:	25 – 40 minutes	
Curing time (22°C):	16 – 30 hours	
Final hardness	10 – 14 days	

**Physical properties:**

Shore-Hardness:	A 40 – 50	ISO 868, DIN 53505
Thermal conductivity:	1.0 W/(m·K)	DIN EN ISO 22007
Glass transition temperature:	-23.1°C	TMA
Coefficient of expansion:	141.5 ppm/K 174.4 ppm/K	< Tg, TMA > Tg, TMA
Shrinkage after curing:	<1 %	
Water absorption:	0.2 % (30 days at 23°C)	
Operating temperature:	-40°C up to +130°C	
Flammability classification:	V-0 in 4.0 mm	
Insulation class:	B	IEC 60085

**Electrical properties:**

Dielectrical strength:	24 kV/mm	IEC 60243-1, VDE 0303, TI.2
Volume resistance:	10 <sup>15</sup> Ω·cm (23°C/ 50% r.F.)	IEC 60243-1, VDE0303, TI.30
Surface resistance:	10 <sup>16</sup> Ω (23°C/ 50% r.F.)	IEC 60243-1, VDE0303, TI.30
Dielectric constant (ε <sub>r</sub> ):		
at 50 Hz, 23 °C	5.2	IEC 60250,
at 1 KHz, 23 °C	4.6	VDE 0303, TI.4
at 1 MHz, 23 °C	4.3	
Dielectric dissipation factor: (tan δ)		IEC 60250,
at 50 Hz, 23 °C	0.12	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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