Thermal Conductivity

Resin 8519/30 (ex FR30) + Hardener 8973 (ex 1073)

- **2-components polyurethane casting resin**
- **solvent-free system and electrically insulating**
- **excellent thermal conductivity**
- **no metallic fillers**
- **no halogenated flame-retardants**
- **excellent adhesive properties**
- **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 8519	100 parts
	Hardener 8973	7 parts
Viscosity (22°C) (At 10 rpm):	Resin 8519	100'000 – 140'000 mPa·s
	Hardener 8973	15 – 35 mPa·s
	Mixing viscosity	60'000 – 100'000 mPa·s
Density (22°C):	Resin 8519	2.00 – 2.20 g/cm³
	Hardener 8973	1.20 – 1.25 g/cm³
Colour:	Nature (beige)	
Pot life:	10 – 30 minutes The curing time depends on thickness of the layer, the casting volume and the temperature	
Curing time (22°C):	16 – 30 hours	
Final hardness	10 – 14 days	

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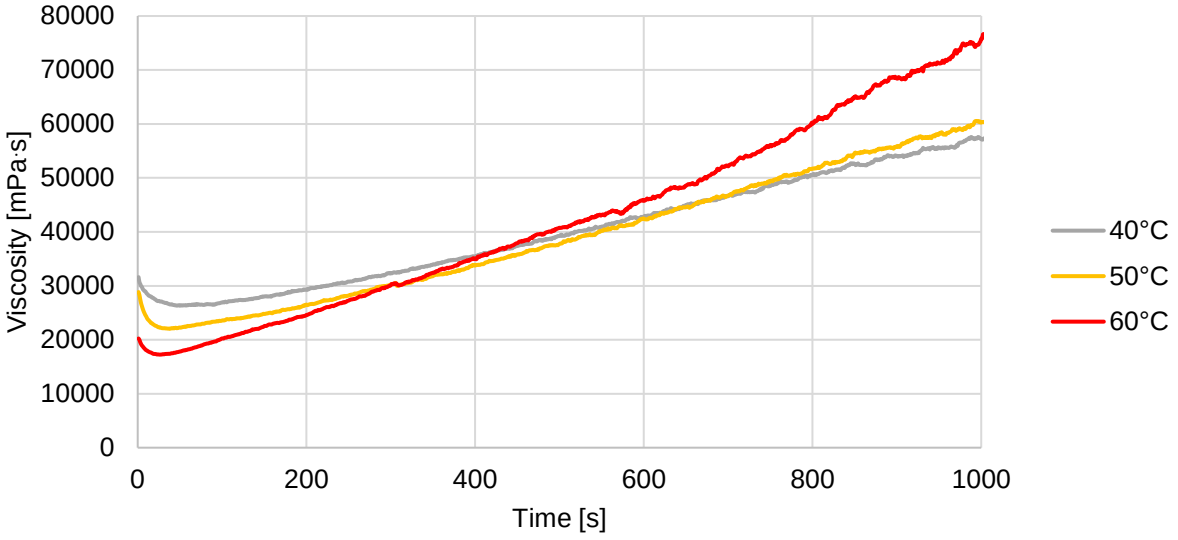
Viscosity curve:

Viscosity over time (At 10 rpm)



Physical properties:

Shore-Hardness:	D 20 – 30	ISO 868, DIN 53505
Thermal conductivity:	3.5 W/(m·K)	DIN EN ISO 22007
Glass transition temperature:	-8.4 °C	TMA
Coefficient of expansion:	131.5 ppm/K 157.4 ppm/K	< Tg, TMA > Tg, TMA
Shrinkage after curing:	<1 %	
Water absorption:	0.4 % (30 days at 23°C)	
Operating temperature:	-40°C up to +130°C	
Flammability classification:	V-0 in 4.0mm	

Electrical properties:

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

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