

Thermal Conductivity

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

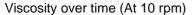
- 2-components polyurethane casting resin
- solvent-free system and electrically insulating
- · excellent thermal conductivity
- no metallic fillers
- no halogenated flame-retardants
- · excellent adhesive properties
- ideal for heat-reduction of winding goods, electric motors, accumulators, and high-performance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

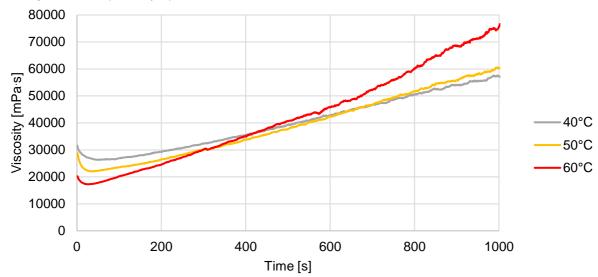
Product specification:

Resin 8519	100 parts	
Hardener 8973	7 parts	
Resin 8519	100'000 − 140'000 mPa⋅s	
Hardener 8973	15 − 35 mPa⋅s	
Mixing viscosity	60'000 − 100'000 mPa·s	
Resin 8519	2.00 – 2.20 g/cm ³	
Hardener 8973	1.20 – 1.25 g/cm³	
Nature (beige)		
10 – 30 minutes		
The curing time depends on thickness of the layer, the casting volume		
and the temperature		
16 – 30 hours		
10 – 14 days		
	Hardener 8973 Resin 8519 Hardener 8973 Mixing viscosity Resin 8519 Hardener 8973 Nature (beige) 10 – 30 minutes The curing time depends on thick and the temperature 16 – 30 hours	



Viscosity curve:





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	ТМА
Coefficient of expansion:	131.5 ppm/K	< Tg, TMA
	157.4 ppm/K	> 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	

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Electrical properties:

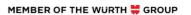
Dielectric strength:	28 kV/mm	IEC 60243-1, VDE 0303, TI.2
Volume resistance:	10 ¹⁵ Ω·cm (23°C/ 50% r.F.)	IEC 60243-1, VDE0303, TI.30
Surface resistance:	10 ¹⁶ Ω (23°C/ 50% r.F.)	IEC 60243-1, VDE0303, TI.30
Dielectric constant (ε _r):		
at 50 Hz, 23 °C	5.5	IEC 60250,
at 1 KHz, 23 °C	4.5	VDE 0303, TI.4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

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TDS_8519/30N+8973/PC/16.08.2023

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