

## Thermal Conductivity

### Resin 7600 + Hardener 7921

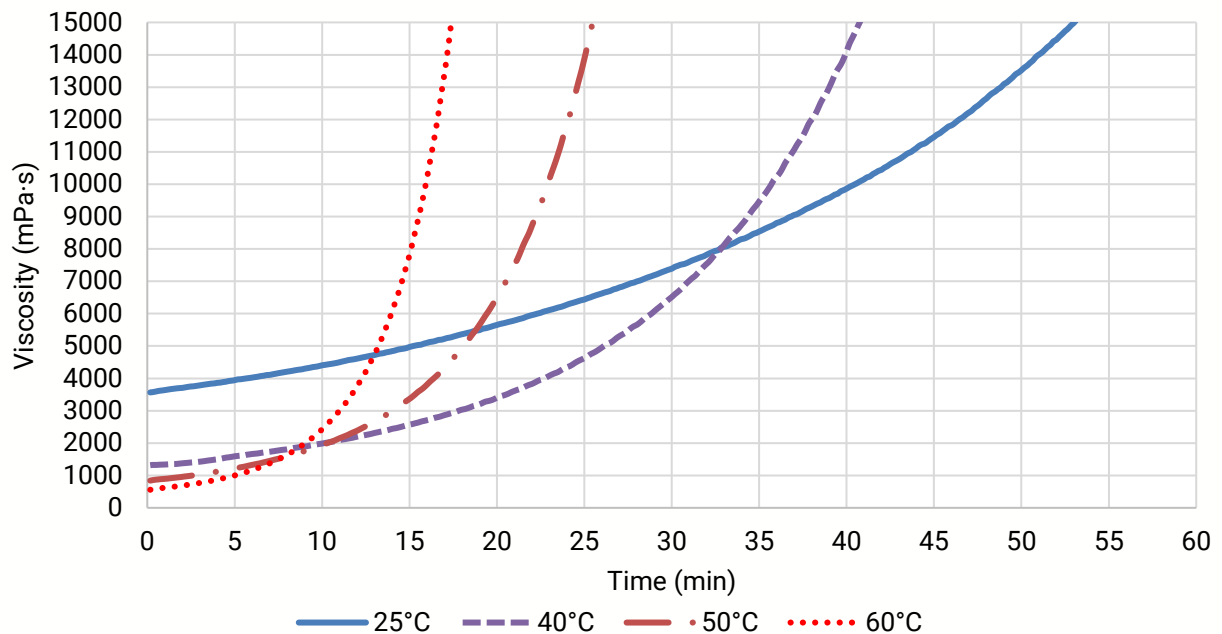
- 2-components epoxy casting resin
- solvent-free system
- no halogenated flame-retardants
- thermal conductivity of 0.8 W/(m·K)
- self-extinguishing properties
- electrically insulating
- high glass transition temperature and chemical resistance
- ideal for electronic components, e.g. sensors and transformers

#### Product specification:

Mixing ratio (weight):	Resin 7600	100 parts
	Hardener 7921	8.7 parts
Density at 25°C: (DIN EN ISO 2811-1)	Resin 7600	1.73 g/cm <sup>3</sup>
	Hardener 7921	0.93 g/cm <sup>3</sup>
	Mixture	1.64 g/cm <sup>3</sup>
Colour:		Black
Viscosity at 25°C: (Plate/Plate; 10 s <sup>-1</sup> )	Resin 7600	15'000 – 25'000 mPa·s
	Hardener 7921	8 – 12 mPa·s
Mixing viscosity (Plate/Plate; 10 s <sup>-1</sup> )	25°C	3'000 – 4'000 mPa·s
	40°C	1'000 – 2'000 mPa·s
	50°C	800 – 1'000 mPa·s
	60°C	500 – 700 mPa·s
Curing time at 23°C:		48 hours
Curing time till 95% max. Tg		2 hours 60°C +
		6 hours 80°C

Pot life: (doubling of viscosity)	25°C	~ 30 minutes
	40°C	~ 16 minutes
	50°C	~ 10 minutes
	60°C	~ 6 minutes
Pot life: (Time to reach 15'000 mPa·s)	25°C	~ 55 minutes
	40°C	~ 40 minutes
	50°C	~ 25 minutes
	60°C	~ 18 minutes
Gel time:	25°C	~ 2 hours 30 minutes
	40°C	~ 1 hour 30 minutes
	50°C	~ 45 minutes
	60°C	~ 30 minutes

Viscosity during curing at different temperatures  
(Plate/Plate; 10 s<sup>-1</sup>)



**Physical properties:**

Shore-Hardness: (DIN EN ISO 868)		D 89
Thermal conductivity:		0.8 W/(m·K)
Glass transition temperature: (DMA half Cp storage modulus)		97 °C
Coefficient of expansion: (DMA)	< Tg > Tg	30 ppm/K 131 ppm/K
Tensile strength (based on DIN EN ISO 527-2)		43 N/mm <sup>2</sup>
Elongation at break (based on DIN EN ISO 527-2)		1.3 %
E-modulus (DIN EN ISO 178)		7'600 N/mm <sup>2</sup>
Flexural strength (DIN EN ISO 178)		80 MPa
Shrinkage after curing:		2.6 %
Operating temperature:		-40°C up to +155°C
Flammability classification: (UL 94)		V-0 in 4.0 mm

**Electrical properties:**

Dielectric strength: (IEC 60243-1)		33.7 kV/mm
Volume resistance: (IEC 62631-3-1)	23°C / 50% r.H.	4.38·10 <sup>14</sup> Ω·cm
Surface resistance: (IEC 62631-3-1)	23°C / 50% r.H.	1.92·10 <sup>12</sup> Ω
Dielectric constant (ε <sub>r</sub> ) at 23°C: (IEC 62631-2-1)	at 50 Hz	5.64
Dielectric dissipation factor (tan δ): at 23°C (IEC 60250)	at 50 Hz	0.0536
Comparative Tracking Index (CTI): (IEC 60112)		600

Shelf life:	24 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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