

Thermal Conductivity

Resin 8520/30N (ex FR 130) + Hardener 8930 (ex 3000)

- 2-components polyurethane casting resin
- CMR-free *
- solvent-free 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**

* not subject to CMR labelling according to section 2 of the safety data sheet

Product specification:

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| Mixing ratio (weight): | Resin 8520/30N | 100 parts |
| | Hardener 8930 | 9 parts |
| Viscosity (22°C): (At 10 rpm) | Resin 8520/30N | 150'000 – 200'000 mPa·s |
| | Hardener 8930 | 450 – 750 mPa·s |
| | Mixing viscosity | 110'000 – 130'000 mPa·s |
| Viscosity (40°C): (At 10 rpm) | Resin 8520/30N | 90'000 – 110'000 mPa·s |
| | Mixing viscosity | 50'000 – 70'000 mPa·s |
| Density (22°C): | Resin 8520/30N | 2.10 – 2.30 g/cm ³ |
| | Hardener 8930 | 1.10 – 1.15 g/cm ³ |
| Colour: | Nature (cream) | |
| Pot life (40°C): | 15 – 25 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 | |

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Physical properties:

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| Shore-Hardness: | D 35 – 45 | ISO 868, DIN 53505 |
| Thermal conductivity: | 3.5 W/(m·K) | DIN EN ISO 22007 |
| Glass transition temperature: | -23.3 °C | TMA |
| Coefficient of expansion: | 156.2 ppm/K | < T _g , TMA |
| | 187.9 ppm/K | > T _g , TMA |
| Shrinkage after curing: | <1 % | |
| Water absorption: | 0.4 % (30 days at 23°C) | |
| Operating temperature: | -40°C up to +130°C | |

Electrical properties:

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| 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: | | IEC 60250, |
| (tan δ) | | VDE 0303, TI.4 |
| at 50 Hz, 23 °C | 0.09 | |
| Comparative Tracking Index: | CTI 600 | IEC 60112, VDE 0303, TI.1 |

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| 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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