

## PUre Thermal Conductivity FR 122/30

- 2-components polyurethane casting resin
- 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**

- ✓ The casting resin is used with **PUre Hardener 3000**
- ✓ Product name explanations:
  - PUre Thermal Conductivity = product line
  - FR 122 = product name
  - /30 = potlife configuration in min

### Product specification:

Operating temperature:	-40°C up to +130°C	
Flammability classification:	V-0 in 4,0 mm	
Mixing ratio:	100 parts PUre Thermal Conductivity FR 122/30 12 parts PUre Hardener 3000	
Viscosity (22°C): (At 10 rpm)	resin: PUre Thermal Conductivity FR 122/30	45.000 - 55.000 mPa*s
	hardener: PUre Hardener 3000	450 - 750 mPa*s
	mixing viscosity	12.000 - 18.000 mPa*s
Density (22°C):	resin: PUre Thermal Conductivity FR 122/30	2,40 - 2,50 g/cm <sup>3</sup>
	hardener: PUre Hardener 3000	1,10 - 1,15 g/cm <sup>3</sup>
Colour:	nature, blue or as required	
Potlife:	30 - 45 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	

**Physical properties:**

Shore-Hardness:	D 40 - 50	ISO 868, DIN 53505
Thermal conductivity:	1,5 W/m*K	DIN EN ISO 22007
Glass transition temperature:	~ 17 °C	TMA
Coefficient of expansion:	128,6 ppm/K	< Tg, TMA
	160,3 ppm/K	> Tg, TMA
Shrinkage after curing:	<1 %	
Water absorption:	0,4 % (30 days at 23°C)	
Insulation class:	B	IEC 60085

**Electrical properties:**

Dielectrical strength:	28 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	5,5
	at 1 KHz, 23 °C	4,5
	at 1 MHz, 23 °C	3,9
Dielectric dissipation factor: (tan δ)		IEC 60250, VDE 0303, TI.4
	at 50 Hz, 23 °C	0,09
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.