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**TECHNICAL DATA**

**INSULDERM® EP-650**  
**Epoxy Trickle Resin**

**DESCRIPTION**

Insulderm® EP-650 is a two-part epoxide resin that features high bond strength at all temperatures up to 180°C (Class H). The system is applied by trickle methods at ambient or slightly elevated temperatures to give good penetration and excellent fill of the winding. The cured films have excellent electrical properties together with resistance to atmospheric moisture and chemical attack.

**APPLICATION**

Insulderm EP-650 is primarily used for the trickle impregnation of motor armature and stators together with the encapsulation, sealing and potting of small electronic and electrical components.

**PHYSICAL PROPERTIES**

	Resin		Hardener		Mixed
Colour	Clear		Clear		Yellowish
Specific Gravity (g/cm <sup>3</sup> )	1.1 - 1.16		0.98 - 1.00		1.10 - 1.14
Viscosity (mPas) @ 25°C	2000-2600		50		200 - 600
Mix ratio by weight	5		1		
Mix ration by volume	4.3		1		

**TYPICAL PROPERTIES**

Comparative Tracking Index	> 550 V
Bond strength	245 N
Volume resistivity	10 <sup>13</sup> Ω-cm
Dielectric strength (Dry)	110 kV/mm
Dielectric strength (Wet)	82 kV/mm
Heat Distortion Temperature	115°C
Hardness	> 80 Shore D
Tensile strength	85 N/mm <sup>2</sup>
Operating temperature	180°C
Thermal conductivity	0.22 W/m.K
Coefficient of linear expansion	60 10 <sup>-6</sup> k <sup>-1</sup>
Elongation at break	2%
RoSH compliant	Yes
REACH SVHC concentration	0%

**PACKAGING**

Twin packs 125g, 250g & 500g (Other sizes upon request)

**STORAGE & SHELF-LIFE**

Cool dry conditions in original un-opened contains 24 months at 20°C

**CURING SCHEDULE - 100g SAMPLE**

Temperature	Working life	Gel Time	Light Handling	Full Cure
25°C	20 minutes	30 minutes	12-18 hours	24 hours
50°C	/	/	/	6 hours

The above are typical values & will depend on the cured mass & application. Higher temperatures may be used for faster cure but will result in higher post cure shrinkage & higher exotherm. For maximum properties, a post cure may be required.

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