

Faserverbundwerkstoffe[®] Composite Technology

Technical data

Epoxy Resin HT 2

Highly transparent laminating resin

Description

- Highly transparent, very light, max. slightly reddish in thicker layer
- High degree of UV stability
- Tack-free curing even of thin layers
- Free of nonylphenol



Epoxy resin HT 2 is a highly transparent laminating resin of very low viscosity based on bisphenol A/F. The bisphenol F component reduces the viscosity and prevents the resin from forming crystals at low storage temperatures (less than + 5 °C).

Epoxy resin HT 2 is diluted with a difunctional reactive compound and is free of solvents and fillers.

The system is highly transparent and yields in conjunction with finished glass fabrics (Interglas) highly transparent laminates with good light fastness.

Owing to its low surface tension the system exhibits good filler absorption properties. And it has excellent wetting properties with respect to reinforcing fibres of glass, aramid, and carbon.

Application

Highly transparent, water-resistant laminates, above all for surfboards, snowboards, boat linings, aquarium accessories, light domes, solar cell coatings, floor finishes.

The resin is suitable for all processing methods, e.g. hand lay-up operations, winding, and press moulding (also in vacuum). Metal, wood, plastics, ceramics, etc., can be joined with high-strength bonds without the application of contact pressure. Curing takes place virtually free of shrinkage.

Hardener

The optimal light fastness is provided by the Hardener HT 2. This is a cycloaliphatic amine that is used at room temperature. As with all cold-curing epoxy resin systems, it is also possible to apply additional hot curing at 50 °C for ten hours to enhance the mechanical and thermal properties.

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Hardener HT 2

Description

- Hardener for Epoxy Resin HT 2
- Processing time: 45 minutes
- Free of nonylphenol
- Cold curing



General data of Epoxy Resin HT 2	Unit	Epoxy Resin HT 2	Hardener HT 2
Processing time 100 g - mixture	minutes /20 °C	45	
Mixing ratio at 100 parts by weight Epoxy Resin HT 2	weight (g)	100	48
Curing time (Laminate 1mm)	hours/20 °C	24	
Heat resistance of components	°C (approx.)	60	
Delivery state	-	liquid	
Colour	-	Highly transparent, very light, max. slightly reddish in thicker layer	
Density	g/cm³/20 °C	1.14	1.0
Viscosity	mPa*s/25 °C	400	200
Epoxy value	100/equivalent	0.6	-
Amine equivalent (mean)	g/equivalent	-	80
Refractive index	n _D 25	1.543	1.520
Flashpoint DIN 51584	°C	>120	
Storage (sealed, at 15 °C)	months	36	

Data of the unreinforced cured resin (cured 6 days at RT)	Unit	Specifications
Flexural strength	MPa	100
Tensile strength	MPa	71
Impact strength	kJ/m ²	27
Tensile modulus	MPa	3.0 · 10 ³
Glass transition temperature Tg	°C	60

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