



MULTIPREG E721-FR

120°C (248°F) Curing Modified Epoxy Resin Component Prepreg

E721-FR is a modified epoxy resin system of medium viscosity for cures at 120°C (248°F), pre-impregnated into high performance fibers such as carbon, glass and aramid. E721-FR offers excellent structural properties, flame retardance and exceptional toughness allowing direct lamination to honeycomb without the use of resin film. E721-FR is designed for structural applications in the motor racing, marine industries and for a wide range of engineering applications.

CHARACTERISTICS:

- Excellent adhesive properties; ideal for honeycomb sandwich construction without the use of a resin film
- The resin system used in E721-FR is fire resistant under FAR 25.853 Appendix F – material test criteria (ii)
- Medium tack level; easily laminated onto mold surfaces
- Excellent drape – complex shapes easily formed
- Controlled Flow – excellent surface finish
- Low volatile content – no solvents in manufacturing process

RESIN PROPERTIES

Density	1.34g/cm ³ at 23°C (73°F)
Tg (DMTA) after 1hr at 120°C (248°F)	Onset: 120°C (248°F) Peak Tan δ: 138°C (280°F)
Gelation time	10 mins at 120°C (248°F)



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PROCESSING

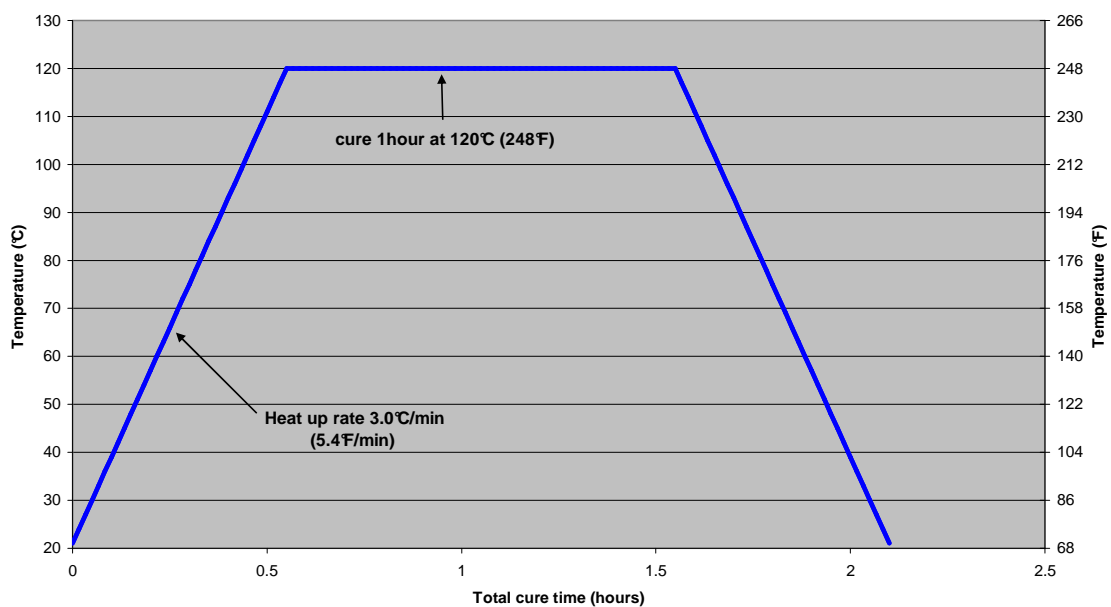
Can be successfully molded by vacuum bag, autoclave, or matched die molding techniques.

In autoclave moulding, pressures up to 6.2 Bar (90 PSI) may be applied.

CURING CYCLES

Cure for 60 mins at 120°C (248°F). It is recommended that heat up rates of 2 to 5°C/min (3.6 to 9°F/min), are employed. Allow to cool to 60°C (140°F) prior to releasing vacuum and removal from mould.

Initial Minimum Cure Schedules - E721FR



TYPICAL LAMINATE PROPERTIES (at Room Temperature)

Flexural Strength	1041 MPa
Flexural Modulus	60 GPa
Interlaminar Shear Strength	56 MPa

The above values are typical for T300 type carbon 0/90°C woven laminates tested to CRAG 100/200, results normalised to 55% fiber volume fraction.



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TYPICAL ADHESIVE PROPERTIES (at Room Temperature)

Climbing drum Peel strength 250 N/76mm

Climbing drum peel strength at 20°C (68°F) according to DTD 5577 using 2 plies of 200g/m² T300 carbon 2/2 twill 46% resin content Multipreg E721-FR on Aluminium honeycomb 5.2-1/4-25-3003.

STORAGE

Shelf life is at least 1 month at ambient temperature 20°C (68°F)

Refrigerated storage life is 12 months at -18°C (0°F)

Following removal from refrigerated storage, allow resin film to reach room temperature before opening the polythene bag, to avoid moisture condensation.

HANDLING SAFETY

Observe established precautions for handling epoxy resins and fibrous materials.

For further information refer to Material Safety Data Sheet.

FURTHER INFORMATION

Please contact Amber Composites for additional information.

This is not a specification. The information given in this data sheet in relation to the performance, storage and other characteristics of the product is based on results gained from experience and tests and is believed to be accurate. Given, however, that conditions of use and storage will vary, Amber Composites will not be liable for any loss or damage resulting from reliance upon such information. The purchaser is recommended to carry out his own tests to establish the suitability of the product for its particular purpose. The use of the product in certain processes may require third party consent.