

E4-193: Solvent-free toughened epoxy resin. This prepreg resin has dry/wet high Tg and long shelf-life at room temperature. It is designed for towpreg applications and it can be applied to a variety of fibres.¹

PRODUCT VARIANTS

E4-193: Unpigmented version

E4-193N: Slightly black pigmented version

SHELF LIFE



OUT LIFE
90 days @ 21 °C



STORAGE LIFE
12 months @ -18 °C

TYPICAL APPLICATIONS



INDUSTRIAL



TYPE 3/4
PRESSURE

FEATURES



HIGH AFTER CURE Tg



GOOD MECHANICAL PERFORMANCES



LONG SHELF-LIFE AT ROOM TEMPRATURE

¹ The system is not designed for cosmetic application, if this application is needed please contact our Technical Department .

NOTE: All technical information contained in this document are given in good faith and are based on tests believed to be reliable, but their accuracy and completeness are not guaranteed. They do not constitute an offer to any person and shall not be deemed to form the basis of any contract. Accordingly, the user shall determine the suitability of the products for their intended use prior to purchase and shall assume all risk and liability in connection therewith. The information contained herein is under constant review and liable to be modified. All products are sold subject to Microtex Composites

CURING CONDITIONS

Autoclave Cure*
Ramp RT to 95°C at 2°C/min
Dwell 360 min
Ramp 95°C to 135°C at 0,3°C/min
Dwell 90 min
Cooling

Post- Cure
Ramp RT to 100°C at 2°C/min
Ramp 100°C to 150°C at 0,3°C/min
Dwell 120 min
Cooling

MATRIX PROPERTIES

Test condition	After cure DMA—E' Onset (°C)**	After cure and post-cure DMA—E' Onset (°C)**
Dry	195	207
Wet: 14days @ 70°C	—	135

* The cure cycle can be modified according to the thickness of the laminates. This cure cycle is designed for laminates with a thickness of 20mm.

** Tested by ASTM D7028. Laminates: 8plies of carbon fabric twill 2x2 245gsm, TORAY T300B 3K, Resin content ≈ 35%. Post-cured.

EXOTHERM RISK

This matrix system can undergo severe exothermic heat up during the curing process if incorrect procedures are followed. Great care must be taken to ensure that safe heating rates, dwell temperatures and lay-up/bagging procedures are properly executed, especially when molding solid laminates with high thickness.

The risk of exotherm increases with lay-up thickness and increasing of temperature cure. It is strongly recommended that the user identifies a safe cure cycle through trials that are representative of all the relevant processing parameters. It is also important to recognize that the model or tool material and its thermal mass, combined with the insulating effect of breather/bagging materials can affect the risk of an exotherm. Please contact our technical department for further information on the exotherm behavior of these systems.

AVAILABILITY

Prepregs are available in a wide range of reinforcing fibers, including carbon, aramid, glass and special fibers.

STORAGE CONDITIONS

This prepreg should be stored as received in a cool dry place or in a refrigerator.

After removal from refrigerated storage, prepreg should be allowed to reach room temperature before opening the polyethylene bag, thus preventing condensation.

PRECAUTIONS FOR USE

The usual precautions when handling uncured resins and fibrous materials should be observed, and a Safety Data Sheet is available for this product.

SDS Reference Codes E4-193: SIS-484