

B1-151 is a bio-based epoxy resin system designed for the manufacture of composite components requiring a high-quality cosmetic finish and a high glass transition temperature (Tg).

The bio-based content is derived from bio-based epichlorohydrin produced from renewable feedstocks, with a bio-based content in the epoxy monomers up to 28%.

B1-151 is supplied on a range of lightweight surface plies and some heavier weight reinforcements.

TYPICAL APPLICATIONS



AUTOMOTIVE



SPORTING
GOODS

FEATURES

-  GOOD TACK AND HANDLEABILITY
-  GREAT AESTHETIC PROPERTIES
-  GREAT Tg DEVELOPMENT

SHELF LIFE



OUT LIFE
4 weeks @ 21 °C



STORAGE LIFE
12 months @ -18 °C

BIO-BASE %

 TOTAL BIO-BASED CONTENT 21%

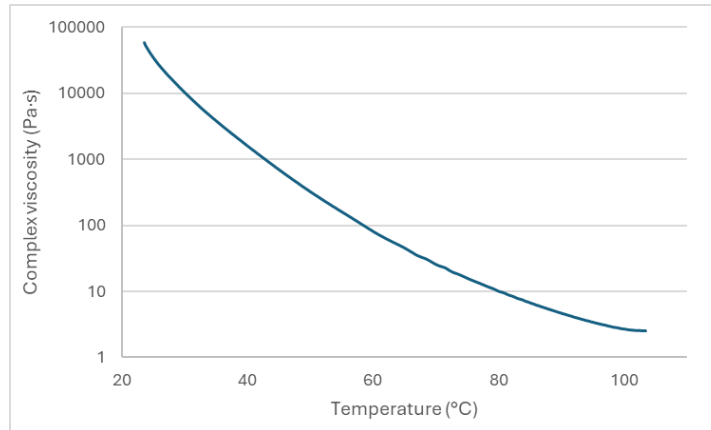
* Where the intended end application is for a cosmetic product, customers are advised to consult a Microtex Composites sales representative for specific advice on fibre selection when placing an order for material.

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 Srl terms and conditions of sale. Copyright 2020 - Microtex Composites Srl. All rights reserved worldwide. All trademarks or registered trademarks are the property of their respective owners.

MATRIX PROPERTIES

Cured resin density @ RT: (average value) 1.16 g/cm³.

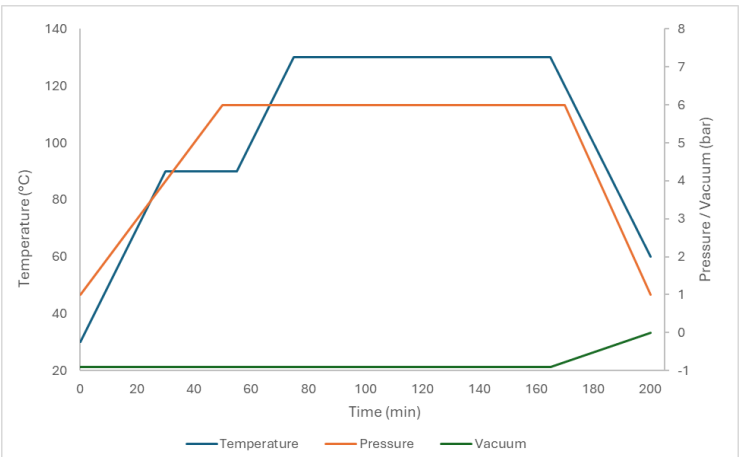
Resin viscosity: ramp rate = 2 °C/min, $\dot{\gamma}$ = 10 rad/sec.



CURING CONDITIONS

Recommended Autoclave Cure ^{1,2}

Time (min)	Temp. (°C)	Time (min)	Pressure (bar)
0	30	0	1
30	90	50	6
55	90	170	6
75	130	200	1
165	130		
200	60		



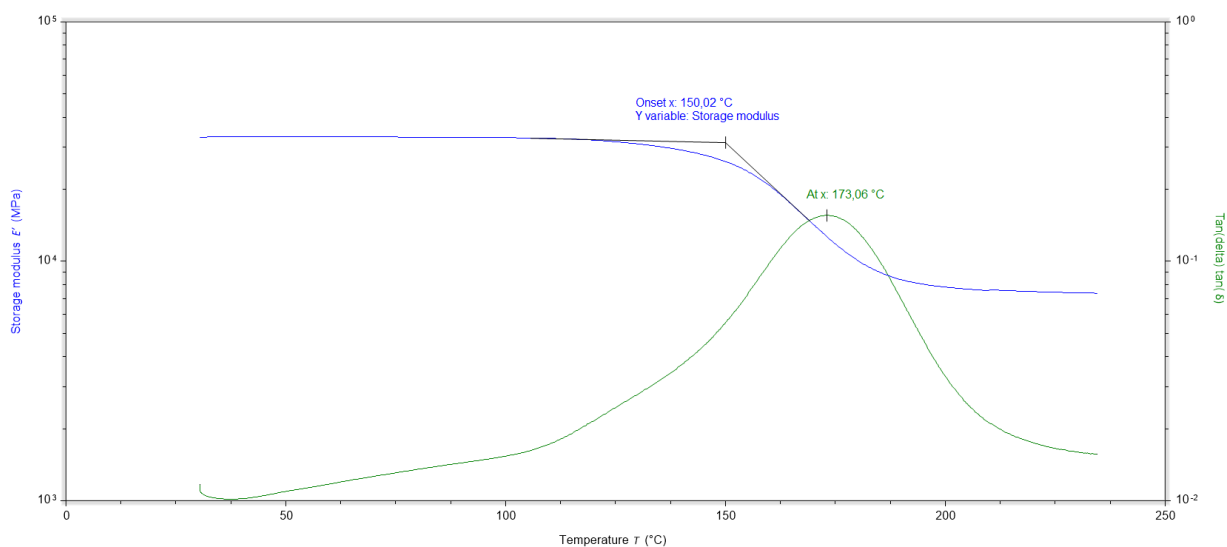
¹ Temperature must be measured by the lagging thermocouple attached to the part.

² Vacuum bag pressure: -0.9 bar.

THERMAL PROPERTIES

B1-151/GG245T-42

Cure cycle	90 min @ 130°C, 6 bar
Tg (DMA) Onset (°C)	150
Tg (DMA) Peak Tan Delta (°C)	173



MECHANICAL PROPERTIES

B1-151 - 90 min @ 130 °C, 6 bar		GG245T-42 ³
Property	Test Method	Value*
0° Tensile Strength [MPa]	ASTM D3039	681
0° Tensile Modulus [GPa]		69
0° Flexural strength [MPa]	ASTM D790	921
0° Flexural modulus [GPa]		55
0° Interlaminar shear strength [MPa]	ASTM D2344	79

* Test conditions: room temperature, dry . Normalized values at 55% VF .

³ Carbon fabric 245 gsm twill 2/2 3K, RC 42%.

AVAILABILITY

B1-151 series prepregs are available in a wide range of reinforcing fabrics, including carbon, aramid, glass and special fabrics.

PRECAUTIONS FOR USE

The usual precautions when handling uncured resins and fibrous materials should be observed,

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 (a full roll in its packaging can take more than 1 day).