

Hexcel® HexPly® F650 Bismaleimide Resin with Graphite F3T584 fabric reinforcement

Category : Polymer , Thermoset , Polyimide, TS

Material Notes:

Aging Data, (T300-3K, 8 H.S.); Laminate Physicals: 59.6% Fiber volume, 34.0% Resin content, 1.0% VoidsInformation provided by HexCel

Order this product through the following link:

http://www.lookpolymers.com/polymer_Hexcel-HexPly-F650-Bismaleimide-Resin-with-Graphite-F3T584-fabric-reinforcement.php

Mechanical Properties	Metric	English	Comments
Flexural Yield Strength	655 MPa @Temperature 232 °C	95000 psi @Temperature 450 °F	Control (Prepreg with no freezer or out time exposure)
	710 MPa @Temperature 232 °C	103000 psi @Temperature 450 °F	Phase V (Prepreg stored in freezer 1 year at -9°C and exposed to 60 days at RT)
	731 MPa @Temperature 232 °C	106000 psi @Temperature 450 °F	Phase I (Prepreg stored in freezer 4 months at -9°C and exposed to 30 days at RT)
	758 MPa @Temperature 232 °C	110000 psi @Temperature 450 °F	Phase II (Prepreg stored in freezer 4 months at -9°C and exposed to 60 days at RT)
	814 MPa @Temperature 232 °C	118000 psi @Temperature 450 °F	Phase III (Prepreg stored in freezer 6 months at -9°C and exposed to 60 days at RT)
	827 MPa @Temperature 232 °C	120000 psi @Temperature 450 °F	Phase IV (Prepreg stored in freezer 1 year at -9°C and exposed to 30 days at RT)
	862 MPa @Temperature 23.0 °C	125000 psi @Temperature 73.4 °F	
	869 MPa @Temperature 23.0 °C	126000 psi @Temperature 73.4 °F	
	876 MPa @Temperature 23.0 °C	127000 psi @Temperature 73.4 °F	
	889 MPa @Temperature 23.0 °C	129000 psi @Temperature 73.4 °F	
	903 MPa @Temperature 23.0 °C	131000 psi @Temperature 73.4 °F	
	924 MPa	134000 psi	

Mechanical Properties	@Temperature 23.0 °C Metric	@Temperature 73.4 °F English	Comments
Compressive Yield Strength	469 MPa @Temperature 232 °C	68000 psi @Temperature 450 °F	Phase II (Prepreg stored in freezer 4 months at -9°C and exposed to 60 days at RT)
	474 MPa @Temperature 232 °C	68700 psi @Temperature 450 °F	Phase V (Prepreg stored in freezer 1 year at -9°C and exposed to 60 days at RT)
	481 MPa @Temperature 232 °C	69800 psi @Temperature 450 °F	Phase III (Prepreg stored in freezer 6 months at -9°C and exposed to 60 days at RT)
	499 MPa @Temperature 232 °C	72400 psi @Temperature 450 °F	Phase IV (Prepreg stored in freezer 1 year at -9°C and exposed to 30 days at RT)
	532 MPa @Temperature 232 °C	77200 psi @Temperature 450 °F	Phase I (Prepreg stored in freezer 4 months at -9°C and exposed to 30 days at RT)
	558 MPa @Temperature 232 °C	80900 psi @Temperature 450 °F	Control (Prepreg with no freezer or out time exposure)
	606 MPa @Temperature 23.0 °C	87900 psi @Temperature 73.4 °F	
	623 MPa @Temperature 23.0 °C	90400 psi @Temperature 73.4 °F	
	703 MPa @Temperature 23.0 °C	102000 psi @Temperature 73.4 °F	
	710 MPa @Temperature 23.0 °C	103000 psi @Temperature 73.4 °F	
	731 MPa @Temperature 23.0 °C	106000 psi @Temperature 73.4 °F	
	738 MPa @Temperature 23.0 °C	107000 psi @Temperature 73.4 °F	
Shear Strength	44.3 MPa @Temperature 232 °C	6430 psi @Temperature 450 °F	Short Beam; Phase II (Prepreg stored in freezer 4 months at -9°C and exposed to 60 days at RT)
	45.9 MPa @Temperature 232 °C	6660 psi @Temperature 450 °F	Short Beam; Phase IV (Prepreg stored in freezer 1 year at -9°C and exposed to 30 days at RT)
	46.1 MPa @Temperature 232 °C	6690 psi @Temperature 450 °F	Short Beam; Phase I (Prepreg stored in freezer 4 months at -9°C and exposed to 30 days at RT)

Mechanical Properties	47.2 MPa Metric	6850 psi English	Comments
	@Temperature 232 °C	@Temperature 450 °F	Short Beam; Phase V (Prepreg stored in freezer 1 year at -9°C and exposed to 60 days at RT)
	49.6 MPa	7190 psi	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	51.1 MPa	7410 psi	Short Beam; Phase III (Prepreg stored in freezer 6 months at -9°C and exposed to 60 days at RT)
	@Temperature 232 °C	@Temperature 450 °F	
	51.7 MPa	7500 psi	Short Beam; Control (Prepreg with no freezer or out time exposure)
	@Temperature 232 °C	@Temperature 450 °F	
	55.2 MPa	8010 psi	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	56.5 MPa	8190 psi	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	60.7 MPa	8800 psi	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	64.1 MPa	9300 psi	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	68.7 MPa	9960 psi	
	@Temperature 23.0 °C	@Temperature 73.4 °F	

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