

## Hexcel® HexPly® F650 Bismaleimide Resin

Category: Polymer, Thermoset, Polyimide, TS

## **Material Notes:**

HexPly® F650 is a bismaleimide resin that cures via an additional/free radical mechanism resulting in a cross-linked thermoset system with no condensation by-products. HexPly® F650 was developed by Hexcel to overcome existing limitations for use on complex structures and ducting in advanced military aircraft, helicopters, and many other high temperature applications. HexPly® F650 simplifies fabrications and delivers a more cost-effective end product. Advantages: Viscous, homogenous; Simple, adjustable, reaction kinetics; No resin advancement at room temperature; Simple processing and impregnation; High glass temperature relative to post cure, Dimensionally stable at greater than 500°F (260°C); High laminate mechanical strengths and strains; modest cost; Non-micro cracking for woven laminates

## Order this product through the following link:

http://www.lookpolymers.com/polymer\_Hexcel-HexPly-F650-Bismaleimide-Resin.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.27 g/cc	1.27 g/cc	
Moisture Absorption at Equilibrium	4.3 %	4.3 %	

Mechanical Properties	Metric	English	Comments
Fracture Toughness	0.460 MPa-m⅓	0.419 ksi-in½	

Thermal Properties	Metric	English	Comments
CTE, linear	49.0 μm/m-°C	27.2 μin/in-°F	
Maximum Service Temperature, Air	>= 260 °C	>= 500 °F	dimensionally stable
Glass Transition Temp, Tg	>= 316 °C	>= 601 °F	
Flame Spread Index	10	10	BMI/F650; ASTM E162
	15 - 20	15 - 20	Epoxy/Typical; ASTM E162

Processing Properties	Metric	English	Comments
Gel Time	5.00 - 8.00 min	5.00 - 8.00 min	
	@Temperature 177 °C	@Temperature 351 °F	

Descriptive Properties	Value	Comments
Smoke Density (µ g/m3), ASTM E662	<25	BMI/F650
	>300	Epoxy/Typical
Toxicity (smoke) (ppm), ASTM 662	>25	Epoxy/Typical



Descriptive Properties Value 2009 Comments

## **Contact Songhan Plastic Technology Co.,Ltd.**

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