

## Hexcel® HexPly® M42 180°C (350°F) Curing Epoxy Matrix

Category : Polymer , Thermoset , Epoxy , Epoxy Cure Resin

### Material Notes:

HexPly® M42 is a high performance, self extinguishing, self adhesive, tough epoxy matrix for use in primary aerospace sandwich structures. It exhibits very high impact resistance and damage tolerance for a wide range of applications. HexPly® M42 is a toughened epoxy resin system supplied with woven glass, carbon and hybrid glass/carbon fibers. HexPly® M42 was developed as a controlled flow system to operate in environments up to 120-130°C. Information provided by HexCel

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Hexcel-HexPly-M42-180C-350F-Curing-Epoxy-Matrix.php](http://www.lookpolymers.com/polymer_Hexcel-HexPly-M42-180C-350F-Curing-Epoxy-Matrix.php)

Physical Properties	Metric	English	Comments
Density	1.26 g/cc	0.0455 lb/in³	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	77.0 MPa	11200 psi	
Elongation at Yield	1.59 %	1.59 %	
Tensile Modulus	4.00 GPa	580 ksi	
Poissons Ratio	0.40	0.40	
Fracture Toughness	1.83 MPa-m½	1.67 ksi-in½	
Shear Modulus	1.43 GPa	207 ksi	Calculated

Thermal Properties	Metric	English	Comments
CTE, linear	59.1 µm/m-°C	32.8 µin/in-°F	
Maximum Service Temperature, Air	120 - 130 °C	248 - 266 °F	
Glass Transition Temp, Tg	153 °C	307 °F	Wet, 14 days in water @ 70°C.
	193 °C	379 °F	Dry

Processing Properties	Metric	English	Comments
Shelf Life	12.0 Month	12.0 Month	
	@Temperature -18.0 °C	@Temperature -0.400 °F	

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