

Hexcel® HexPly® M18 356°F (180°C) Curing Epoxy Matrix

Category : Polymer , Thermoset , Epoxy , Epoxy Cure Resin

Material Notes:

HexPly® M18 has been developed to fulfill the requirements of the aerospace industry for primary structures using standard manufacturing processes. The matrix has improved properties which allow easy layup, good tack life, and a good component surface finish. A low moisture uptake allows good hot/wet performance up to 302°F (150°C) and a general service temperature up to 356°F (180°C). Information provided by HexCel

Order this product through the following link:

http://www.lookpolymers.com/polymer_Hexcel-HexPly-M18-356F-180C-Curing-Epoxy-Matrix.php

Physical Properties	Metric	English	Comments
Density	1.16 g/cc	0.0419 lb/in ³	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	81.1 MPa	11800 psi	ISO R527 type 1
Elongation at Yield	3.7 %	3.7 %	ISO R527 type 1
Tensile Modulus	3.50 GPa	508 ksi	ISO R527 type 1
Flexural Yield Strength	140 MPa	20300 psi	ISO 178
Flexural Modulus	2.86 GPa	415 ksi	ISO 178
Compressive Yield Strength	373 MPa	54100 psi	ISO 604
Poissons Ratio	0.38	0.38	ISO R527 type 1
Fracture Toughness	0.890 MPa-m ^{1/2}	0.810 ksi-in ^{1/2}	Tested in accordance with EGF Task Group on Polymers and Composites protocol.
Shear Modulus	1.27 GPa	184 ksi	Calculated
Toughness	193 J	142 ft-lb	Per square meter; Tested in accordance with EGF Task Group on Polymers and Composites protocol.

Thermal Properties	Metric	English	Comments
Glass Transition Temp, Tg	198 °C	388 °F	DMTA
Shrinkage	1.12 %	1.12 %	

Processing Properties	Metric	English	Comments
Shelf Life	12.0 Month	12.0 Month	

Processing Properties	Metric	@Temperature -0.400 English	Comments
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Descriptive Properties	Value	Comments
Tack Life (days)	30	

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