

## Hexcel® HexPly® 8551-7 Epoxy Matrix, IM7 Fiber

Category : Polymer , Thermoset , Epoxy , Epoxy Cure Resin

### Material Notes:

Information provided by HexCel

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Hexcel-HexPly-8551-7-Epoxy-Matrix-IM7-Fiber.php](http://www.lookpolymers.com/polymer_Hexcel-HexPly-8551-7-Epoxy-Matrix-IM7-Fiber.php)

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	10.9 MPa	1580 psi	Quasi tensile strength
	@Temperature 25.0 °C	@Temperature 77.0 °F	
	57.9 MPa	8400 psi	Quasi tensile strength
	@Temperature 25.0 °C	@Temperature 77.0 °F	
	75.8 MPa	11000 psi	90°, Dry
	@Temperature 25.0 °C	@Temperature 77.0 °F	
	931 MPa	135000 psi	Quasi tensile strength
	@Temperature 25.0 °C	@Temperature 77.0 °F	
	2760 MPa	400000 psi	0°, Dry
	@Temperature 25.0 °C	@Temperature 77.0 °F	
Elongation at Yield	1.0 %	1.0 %	90°, Dry
	@Temperature 25.0 °C	@Temperature 77.0 °F	
	1.64 %	1.64 %	0°, Dry
	@Temperature 25.0 °C	@Temperature 77.0 °F	
Tensile Modulus	8.34 GPa	1210 ksi	90°, Dry
	@Temperature 25.0 °C	@Temperature 77.0 °F	
	159 GPa	23100 ksi	0°, Dry
	@Temperature 25.0 °C	@Temperature 77.0 °F	
Compressive Yield Strength	228 MPa	33100 psi	After 3000 in-inlb/in impact
	@Temperature 25.0 °C	@Temperature 77.0 °F	
	248 MPa	36000 psi	Open hole compression, Wet
	@Temperature 104 °C	@Temperature 219 °F	
	255 MPa	37000 psi	Open hole compression, Wet
	@Temperature 82.0 °C	@Temperature 180 °F	

Mechanical Properties	290 MPa Metric	42100 psi English	Comments Open hole compression, Dry
	@Temperature 25.0 °C	@Temperature 77.0 °F	
	<b>303 MPa</b>	<b>43900 psi</b>	<b>After 2500 in-inlb/in impact</b>
	@Temperature 25.0 °C	@Temperature 77.0 °F	
	<b>324 MPa</b>	<b>47000 psi</b>	<b>After 2000 in-inlb/in impact</b>
	@Temperature 25.0 °C	@Temperature 77.0 °F	
	<b>345 MPa</b>	<b>50000 psi</b>	<b>After 1500 in-inlb/in impact</b>
	@Temperature 25.0 °C	@Temperature 77.0 °F	
	<b>462 MPa</b>	<b>67000 psi</b>	<b>After 500 in-inlb/in impact</b>
	@Temperature 25.0 °C	@Temperature 77.0 °F	
	<b>586 MPa</b>	<b>85000 psi</b>	<b>Unimpacted</b>
	@Temperature 25.0 °C	@Temperature 77.0 °F	
	<b>1100 MPa</b>	<b>160000 psi</b>	<b>0°, Wet</b>
	@Temperature 82.0 °C	@Temperature 180 °F	
	<b>1280 MPa</b>	<b>186000 psi</b>	<b>0°, Dry</b>
	@Temperature 121 °C	@Temperature 250 °F	
	<b>1380 MPa</b>	<b>200000 psi</b>	<b>0°, Dry</b>
	@Temperature 82.0 °C	@Temperature 180 °F	
	<b>1620 MPa</b>	<b>235000 psi</b>	<b>0°, Dry</b>
	@Temperature 25.0 °C	@Temperature 77.0 °F	
<b>Compressive Modulus</b>	<b>143 GPa</b>	<b>20700 ksi</b>	<b>0°, Wet</b>
	@Temperature 82.0 °C	@Temperature 180 °F	
	<b>145 GPa</b>	<b>21000 ksi</b>	<b>0°, Dry</b>
	@Temperature 82.0 °C	@Temperature 180 °F	
	<b>148 GPa</b>	<b>21500 ksi</b>	<b>0°, Dry</b>
	@Temperature 25.0 °C	@Temperature 77.0 °F	
	<b>150 GPa</b>	<b>21800 ksi</b>	<b>0°, Wet</b>
	@Temperature 104 °C	@Temperature 219 °F	
	<b>152 GPa</b>	<b>22000 ksi</b>	<b>0°, Dry</b>
	@Temperature 121 °C	@Temperature 250 °F	
	<b>5.86 GPa</b>	<b>850 ksi</b>	

Shear Modulus Mechanical Properties	Metric @ Temperature 25.0 °C	English @ Temperature 77.0 °F	In-Plane +/- 45 tensile shear; Dry Comments
Shear Strength	40.0 MPa @Temperature 129 °C	5800 psi @Temperature 264 °F	Short Beam, Wet
	56.5 MPa @Temperature 121 °C	8190 psi @Temperature 250 °F	Short Beam, Wet
	68.9 MPa @Temperature 121 °C	9990 psi @Temperature 250 °F	Short Beam, Dry
	68.9 MPa @Temperature 82.0 °C	9990 psi @Temperature 180 °F	Short Beam, Wet
	79.3 MPa @Temperature 82.0 °C	11500 psi @Temperature 180 °F	Short Beam, Dry
	100 MPa @Temperature 25.0 °C	14500 psi @Temperature 77.0 °F	Short Beam, Dry
	117 MPa @Temperature 25.0 °C	17000 psi @Temperature 77.0 °F	In-Plane +/- 45 tensile shear; Dry

Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air	93.3 °C	200 °F	Epoxy Matrix Limit

## Contact Songhan Plastic Technology Co.,Ltd.

Website : [www.lookpolymers.com](http://www.lookpolymers.com)

Email : [sales@lookpolymers.com](mailto:sales@lookpolymers.com)

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China