

## Azdel Plus R451-B02 45% Continuous Random Fiber Mat / PP Resin Matrix

Category : Polymer , Thermoplastic , Polypropylene (PP)

### Material Notes:

AZDEL® R451-B01 is a glass mat thermoplastic laminate based upon a random oriented continuous fiber mat contained within a polypropylene resin matrix. This composite material features high flow properties and a very homogeneous fiber distribution. This material is typically used for standard semi-structural applications where high stiffness and impact are desired. Mechanical properties and mold shrinkage measured on flat plaques. Information provided by Azdel.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Azdel-Plus-R451-B02-45-Continuous-Random-Fiber-Mat-PP-Resin-Matrix.php](http://www.lookpolymers.com/polymer_Azdel-Plus-R451-B02-45-Continuous-Random-Fiber-Mat-PP-Resin-Matrix.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.23 g/cc	1.23 g/cc	Laminate; ASTM D792
	1.27 g/cc	1.27 g/cc	Molded; ASTM D792
Filler Content	45 %	45 %	By weight (ashing); Internal
Thickness	3700 microns	146 mil	Sheet; Internal
Linear Mold Shrinkage	0.0010 - 0.0030 cm/cm	0.0010 - 0.0030 in/in	Measured on flat plaques; ASTM D955

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	140 MPa	20300 psi	ISO 527
Elongation at Break	2.4 %	2.4 %	ISO 527
Tensile Modulus	6.92 GPa	1000 ksi	ISO 527
Flexural Strength	120 MPa	17400 psi	ISO 178
Flexural Modulus	7.05 GPa	1020 ksi	ISO 178
Poissons Ratio	0.37	0.37	ISO 527
Izod Impact, Notched	10.25 J/cm	19.20 ft-lb/in	ISO 180
	@Thickness 4.00 mm, Temperature 23.0 °C	@Thickness 0.157 in, Temperature 73.4 °F	
Impact	430	430	Multi-axial in kg, at max. load; ASTM D3763
	@Thickness 4.00 mm	@Thickness 0.157 in	
Impact Test	17.0 J	12.5 ft-lb	Multi-axial, at max. load; ASTM D3763
	@Thickness 4.00 mm	@Thickness 0.157 in	
	31.0 J	22.9 ft-lb	Multi-axial, at failure; ASTM D3763

Mechanical Properties	@Thickness 4.00 mm Metric	@Thickness 0.157 in English	Comments
Thermal Properties	Metric	English	Comments
CTE, linear	29.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$ @Temperature -40.0 - 120 $^{\circ}\text{C}$	16.1 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$ @Temperature -40.0 - 248 $^{\circ}\text{F}$	ASTM E831
Deflection Temperature at 1.8 MPa (264 psi)	159 $^{\circ}\text{C}$	318 $^{\circ}\text{F}$	ASTM D648
Descriptive Properties	Value		Comments
Color	Black		Internal

## Contact Songhan Plastic Technology Co.,Ltd.

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