

D100F40-F1

D100F40-F1 is a chopped fiber glass mat reinforced PP laminate with randomly oriented glass fibers. This product provides good flow properties, a very homogeneous fiber distribution and higher heat stabilization. It is commonly used for structural applications, like front-ends, seat back structures, door modules, battery trays, underbody shields and IP structures.

Properties	Standard	SI Units		Engl. Units		
<u>Physical Properties</u>						
Laminate Thickness*	Internal	4.9	mm	0.193	in	
Area Weight*	Internal	5831	g/m ²	1.194	lb/ft ²	
Fiber Content**	ISO 1172 / PA_73, 78	40	%	40	%	
Density (Laminate)*	ISO 1183 / PA_137	1.19	g/cm ³	0.0430	lb/in ³	
Density (Molded)**	ISO 1183 / PA_138	1.22	g/cm ³	0.0441	lb/in ³	
<u>Mechanical Properties</u>^{3)**}						
Tensile Strength	ISO 527 / PA_098	75	MPa	10879	psi	
Tensile Elongation at Break	ISO 527 / PA_098	2.2	%	2.2	%	
Tensile Modulus	ISO 527 / PA_098	5265	MPa	764	ksi	
Flexural Strength	ISO 178 / PA_100	125	MPa	18131	psi	
Flexural Modulus	ISO 178 / PA_100	5135	MPa	745	ksi	
Impact Strength -	IZOD (3.2 mm)	ASTM D256 E	786	J/m	15	ft*lb(wt)/in
	Charpy (4.0 mm)	ISO 179-1/2fn / PA_97	90	kJ/m ²	43	ft*lb/in ²
Multiaxial Impact (4.0mm)						
Max. Load	ASTM D-3763	3423	N	770	lb(wt)	
Energy @ Max. Load		17	J	13	ft*lb	
Energy @ Failure		31	J	23	ft*lb	
Max. Load	ISO 6603-2 / PA_406	5739	N	1290	lb(wt)	
Energy @ Max. Load		16	J	12	ft*lb	
Energy @ Failure		39	J	29	ft*lb	
<u>Processing Properties</u>**						
Molding Shrinkage	ISO 2577	0.2 - 0.3	%	0.2 - 0.3	%	
<u>Special Properties</u>**						
Heat Deflection Temperature	ISO 75-2A / PA_350	159	°C	318.2	°F	
Coefficient of Thermal Expansion	EN ISO 11403-2	15 - 25	10 ⁻⁶ /K	15 - 25	10 ⁻⁶ /K	
Burning Rate	ISO 3795 / FMVSS302	<10	mm/min	<0.4	in/min	

1) = measured in longitudinal direction

2) = measured in transverse direction

3) = crosswise molded

4) = lengthwise molded

* = Property was determined on the laminate

** = Property was determined on flat molded plaques

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