

Generic PP, Unspecified - Glass Fiber

Polypropylene

Generic

Message:

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General Information			
Filler / Reinforcement	Glass fiber reinforced material		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	0.933 - 1.25	g/cm ³	ASTM D792
23°C	1.04 - 1.13	g/cm ³	ISO 1183
--	0.960 - 1.23	g/cm ³	ASTM D1505
Melt Mass-Flow Rate (MFR)			
230°C/2.16 kg	1.9 - 12	g/10 min	ASTM D1238
230°C/2.16 kg	0.20 - 13	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (230°C/2.16 kg)	3.00 - 18.2	cm ³ /10min	ISO 1133
Molding Shrinkage			
Flow: 23°C	0.17 - 0.84	%	ASTM D955
Transverse flow: 23°C	0.77 - 1.2	%	ASTM D955
23°C	0.12 - 2.0	%	ISO 294-4
Water Absorption			
23°C, 24 hr	7.0E-3 - 0.032	%	ASTM D570
23°C, 24 hr	0.025 - 0.10	%	ISO 62
Saturated, 23°C	0.020	%	ASTM D570
Equilibrium, 23°C	0.020 - 1.5	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			
23°C	83 - 117		ASTM D785
23°C	98 - 110		ISO 2039-2
Durometer Hardness (23°C)	70 - 76		ASTM D2240
Ball Indentation Hardness	85.0 - 125	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
23°C	2020 - 9050	MPa	ASTM D638
23°C	2890 - 9280	MPa	ISO 527-2
Tensile Strength			
Yield, 23°C	34.2 - 93.5	MPa	ASTM D638
Yield, 23°C	23.4 - 104	MPa	ISO 527-2

Fracture, 23°C	26.9 - 120	MPa	ASTM D638
Fracture, 23°C	1.95 - 111	MPa	ISO 527-2
23°C	32.4 - 91.5	MPa	ASTM D638
23°C	52.3 - 119	MPa	ISO 527-2
Tensile Elongation			
Yield, 23°C	1.5 - 10	%	ASTM D638
Yield, 23°C	1.8 - 4.7	%	ISO 527-2
Fracture, 23°C	1.0 - 6.0	%	ASTM D638
Fracture, 23°C	1.5 - 6.7	%	ISO 527-2
Flexural Modulus			
23°C	1970 - 6980	MPa	ASTM D790
23°C	1640 - 6980	MPa	ISO 178
Flexural Strength			
23°C	34.4 - 141	MPa	ASTM D790
23°C	35.6 - 157	MPa	ISO 178
Yield, 23°C	41.2 - 145	MPa	ASTM D790
Fracture, 23°C	148 - 150	MPa	ASTM D790
Compressive Strength (23°C)	44.1 - 51.4	MPa	ASTM D695
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	4.9 - 16	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength (23°C)	19 - 59	kJ/m ²	ISO 179
Notched Izod Impact			
23°C	25 - 120	J/m	ASTM D256
23°C	3.0 - 14	kJ/m ²	ISO 180
Unnotched Izod Impact			
23°C	180 - 660	J/m	ASTM D256
23°C	19 - 46	kJ/m ²	ISO 180
Instrumented Dart Impact			
23°C	3.70 - 17.4	J	ASTM D3763
23°C	1.70 - 2.21	J	ISO 6603-2
Dart Drop Impact (23°C)	0.226 - 0.347	J	ASTM D3029
Dart Drop Impact (23°C)	0.205 - 0.572	J	ASTM D5420
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, not annealed	148 - 164	°C	ASTM D648
0.45 MPa, not annealed	130 - 164	°C	ISO 75-2/B
1.8 MPa, not annealed	119 - 155	°C	ASTM D648
1.8 MPa, not annealed	118 - 162	°C	ISO 75-2/A
Vicat Softening Temperature			
--	118 - 161	°C	ASTM D1525
--	110 - 167	°C	ISO 306
Melting Temperature			

--	160 - 183	°C	
--	159 - 162	°C	ISO 3146
Linear thermal expansion coefficient			
Flow	3.0E-5 - 5.6E-5	cm/cm/°C	ASTM D696
Flow	7.0E-6 - 1.1E-4	cm/cm/°C	ISO 11359-2
Lateral	4.4E-5 - 1.3E-4	cm/cm/°C	ISO 11359-2
Thermal Conductivity (23°C)	0.22 - 0.34	W/m/K	ASTM C177
RTI Elec	65.0 - 120	°C	UL 746
RTI Imp	65.0 - 120	°C	UL 746
RTI	65.0 - 120	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity			
--	5.1E+2 - 1.3E+16	ohms	ASTM D257
--	2.0E+2 - 1.0E+16	ohms	IEC 60093
Volume Resistivity			
23°C	1.0E+3 - 1.3E+16	ohms·cm	ASTM D257
23°C	12 - 1.0E+17	ohms·cm	IEC 60093
Dielectric Strength			
23°C	19 - 41	kV/mm	ASTM D149
23°C	17 - 61	kV/mm	IEC 60243-1
Dielectric Constant (23°C)	2.30 - 3.30		ASTM D150
Dissipation Factor (23°C)	1.0E-3 - 1.2E-3		ASTM D150
Arc Resistance	80.0 - 130	sec	ASTM D495
Comparative Tracking Index	595 - 650	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Glow Wire Flammability Index	844 - 960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature	650 - 960	°C	IEC 60695-2-13
Injection	Nominal Value	Unit	
Drying Temperature	69.7 - 100	°C	
Drying Time	1.4 - 4.0	hr	
Suggested Max Moisture	0.048 - 0.053	%	
Suggested Max Regrind	15	%	
Rear Temperature	197 - 230	°C	
Middle Temperature	212 - 236	°C	
Front Temperature	214 - 248	°C	
Nozzle Temperature	215 - 246	°C	
Processing (Melt) Temp	209 - 240	°C	
Mold Temperature	39.0 - 62.8	°C	
Injection Pressure	5.52 - 97.1	MPa	
Holding Pressure	4.48 - 46.4	MPa	
Back Pressure	0.150 - 1.25	MPa	
Screw Speed	44 - 57	rpm	

Cushion	8.89 - 8.91	mm
Injection instructions		

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