

Generic ABS - Glass Fiber

Acrylonitrile Butadiene Styrene

Generic

Message:

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General Information			
Filler / Reinforcement	Glass fiber reinforced material		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.07 - 1.37	g/cm ³	ASTM D792
23°C	1.10 - 1.33	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR)			
220°C/10.0 kg	2.5 - 12	g/10 min	ASTM D1238
220°C/10.0 kg	0.20 - 19	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (220°C/10.0 kg)	5.25 - 13.4	cm ³ /10min	ISO 1133
Molding Shrinkage			
Flow: 23°C	0.050 - 0.36	%	ASTM D955
Transverse flow: 23°C	0.38 - 0.70	%	ASTM D955
23°C	0.18 - 0.40	%	ISO 294-4
Water Absorption			
23°C, 24 hr	0.050 - 0.35	%	ASTM D570
23°C, 24 hr	0.030 - 0.45	%	ISO 62
Equilibrium, 23°C, 50% RH	0.20 - 0.21	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			
23°C	98 - 126		ASTM D785
23°C	109 - 119		ISO 2039-2
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
23°C	58.0 - 9830	MPa	ASTM D638
23°C	3420 - 8040	MPa	ISO 527-2
Tensile Strength			
Yield, 23°C	40.8 - 99.4	MPa	ASTM D638
Yield, 23°C	43.0 - 114	MPa	ISO 527-2
Fracture, 23°C	40.5 - 98.5	MPa	ASTM D638
Fracture, 23°C	41.5 - 102	MPa	ISO 527-2
23°C	41.4 - 105	MPa	ASTM D638
Tensile Elongation			

Yield, 23°C	1.0 - 3.6	%	ASTM D638
Fracture, 23°C	2.0 - 5.3	%	ASTM D638
Fracture, 23°C	1.7 - 3.0	%	ISO 527-2
Flexural Modulus			
23°C	2800 - 8530	MPa	ASTM D790
23°C	3200 - 8010	MPa	ISO 178
Flexural Strength			
23°C	60.4 - 161	MPa	ASTM D790
23°C	59.0 - 157	MPa	ISO 178
Yield, 23°C	64.8 - 142	MPa	ASTM D790
Fracture, 23°C	63.3 - 132	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	4.5 - 9.2	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength (23°C)	7.0 - 50	kJ/m ²	ISO 179
Notched Izod Impact			
23°C	47 - 110	J/m	ASTM D256
23°C	4.9 - 10	kJ/m ²	ISO 180
Unnotched Izod Impact			
23°C	230 - 410	J/m	ASTM D256
23°C	15 - 24	kJ/m ²	ISO 180
Instrumented Dart Impact			
23°C	4.80 - 15.3	J	ASTM D3763
23°C	1.60 - 3.34	J	ISO 6603-2
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, not annealed	96.3 - 114	°C	ASTM D648
0.45 MPa, not annealed	99.3 - 105	°C	ISO 75-2/B
1.8 MPa, not annealed	89.2 - 108	°C	ASTM D648
1.8 MPa, not annealed	93.8 - 105	°C	ISO 75-2/A
Vicat Softening Temperature			
--	99.1 - 116	°C	ASTM D1525
--	98.8 - 111	°C	ISO 306
Linear thermal expansion coefficient			
Flow	1.3E-5 - 5.5E-5	cm/cm/°C	ASTM D696
Flow	2.2E-5 - 1.1E-4	cm/cm/°C	ISO 11359-2
Lateral	4.3E-5 - 8.1E-5	cm/cm/°C	ISO 11359-2
RTI Elec	60.0 - 75.0	°C	UL 746
RTI Imp	60.0 - 75.0	°C	UL 746
RTI	60.0 - 75.0	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity			
--	50 - 2.5E+15	ohms	ASTM D257

--	1.0E+13 - 2.5E+15	ohms	IEC 60093
Volume Resistivity			
23°C	1.0E+2 - 1.0E+16	ohms·cm	ASTM D257
23°C	1.0E+13 - 2.5E+16	ohms·cm	IEC 60093
Dielectric Strength			
23°C	16 - 19	kV/mm	ASTM D149
23°C	30 - 37	kV/mm	IEC 60243-1
Comparative Tracking Index	398 - 600	V	IEC 60112
Hot-wire Ignition (HWI)	120	sec	UL 746
Flammability	Nominal Value	Unit	Test Method
Burning Rate	0.0 - 100	mm/min	ISO 3795
Glow Wire Flammability Index	650 - 960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature	550 - 960	°C	IEC 60695-2-13
Injection	Nominal Value	Unit	
Drying Temperature	78.0 - 87.0	°C	
Drying Time	2.0 - 9.0	hr	
Drying Time, Maximum	6.0	hr	
Suggested Max Moisture	0.048 - 0.10	%	
Suggested Shot Size	55	%	
Suggested Max Regrind	20	%	
Rear Temperature	193 - 254	°C	
Middle Temperature	214 - 238	°C	
Front Temperature	204 - 271	°C	
Nozzle Temperature	209 - 245	°C	
Processing (Melt) Temp	213 - 261	°C	
Mold Temperature	53.6 - 80.7	°C	
Injection Pressure	73.4 - 105	MPa	
Back Pressure	0.150 - 2.01	MPa	
Screw Speed	45 - 75	rpm	
Injection instructions			

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