

Generic Nylon 66 - Glass Bead

Polyamide 66

Generic

Message:

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General Information			
Filler / Reinforcement	Glass beads		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.23 - 1.48	g/cm ³	ASTM D792
23°C	1.22 - 1.49	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (275°C/0.325 kg)	1.0 - 4.0	g/10 min	ISO 1133
Molding Shrinkage			
Flow: 23°C	0.34 - 2.1	%	ASTM D955
Transverse flow: 23°C	1.4 - 2.0	%	ASTM D955
23°C	0.47 - 1.7	%	ISO 294-4
Water Absorption			
23°C, 24 hr	0.66 - 1.0	%	ASTM D570
23°C, 24 hr	0.68 - 1.2	%	ISO 62
Saturated, 23°C	4.5 - 7.1	%	ISO 62
Equilibrium, 23°C, 50% RH	0.51 - 2.5	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (23°C)	119 - 122		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
23°C	2800 - 6760	MPa	ASTM D638
23°C	3590 - 5440	MPa	ISO 527-2
Tensile Strength			
Yield, 23°C	75.1 - 138	MPa	ASTM D638
Yield, 23°C	61.9 - 112	MPa	ISO 527-2
Fracture, 23°C	53.8 - 105	MPa	ASTM D638
Fracture, 23°C	55.3 - 95.8	MPa	ISO 527-2
23°C	53.7 - 140	MPa	ASTM D638
Tensile Elongation			
Yield, 23°C	2.4 - 4.7	%	ASTM D638
Yield, 23°C	1.7 - 4.4	%	ISO 527-2
Fracture, 23°C	1.7 - 9.0	%	ASTM D638
Fracture, 23°C	1.5 - 9.3	%	ISO 527-2

Flexural Modulus			
23°C	3260 - 6960	MPa	ASTM D790
23°C	3150 - 4720	MPa	ISO 178
Flexural Strength			
23°C	98.5 - 166	MPa	ASTM D790
23°C	99.0 - 187	MPa	ISO 178
Yield, 23°C	103 - 124	MPa	ASTM D790
Fracture, 23°C	128 - 189	MPa	ASTM D790
Compressive Strength (23°C)	47.6 - 252	MPa	ASTM D695
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	1.5 - 7.7	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength (23°C)	19 - 42	kJ/m ²	ISO 179
Notched Izod Impact			
23°C	31 - 55	J/m	ASTM D256
23°C	2.0 - 6.3	kJ/m ²	ISO 180
Unnotched Izod Impact			
23°C	200 - 640	J/m	ASTM D256
23°C	20 - 40	kJ/m ²	ISO 180
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, not annealed	204 - 260	°C	ASTM D648
0.45 MPa, not annealed	198 - 256	°C	ISO 75-2/B
1.8 MPa, not annealed	65.6 - 254	°C	ASTM D648
1.8 MPa, not annealed	74.3 - 250	°C	ISO 75-2/A
Continuous Use Temperature	90.0 - 121	°C	ASTM D794
Vicat Softening Temperature	200 - 255	°C	ISO 306
Melting Temperature			
--	255 - 260	°C	
--	256 - 263	°C	ISO 11357-3
--	256 - 260	°C	ASTM D3418
--	260	°C	ISO 3146
Linear thermal expansion coefficient			
Flow	5.9E-5 - 6.1E-5	cm/cm/°C	ASTM D696
Flow	3.0E-5 - 7.1E-5	cm/cm/°C	ISO 11359-2
Lateral	3.0E-5 - 6.1E-5	cm/cm/°C	ISO 11359-2
Thermal Conductivity (23°C)	0.26 - 0.36	W/m/K	ASTM C177
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+4 - 1.3E+14	ohms	IEC 60093
Volume Resistivity			
23°C	1.0E+11 - 1.0E+15	ohms · cm	ASTM D257
23°C	1.0E+12 - 2.5E+15	ohms · cm	IEC 60093
Dielectric Strength			

23°C	16 - 30	kV/mm	ASTM D149
23°C	29 - 41	kV/mm	IEC 60243-1
Dielectric Constant			
23°C	3.70 - 4.20		ASTM D150
23°C	3.79		IEC 60250
Dissipation Factor			
23°C	0.014 - 0.016		ASTM D150
23°C	1.0E-4 - 0.020		IEC 60250
Comparative Tracking Index	399 - 600	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Glow Wire Flammability Index	650 - 658	°C	IEC 60695-2-12
Glow Wire Ignition Temperature	650 - 655	°C	IEC 60695-2-13
Oxygen Index	23 - 27	%	ASTM D2863, ISO 4589-2
Injection	Nominal Value	Unit	
Drying Temperature	79.0 - 83.0	°C	
Drying Time	2.8 - 5.3	hr	
Suggested Max Moisture	0.12 - 0.20	%	
Suggested Max Regrind	20	%	
Rear Temperature	265 - 300	°C	
Middle Temperature	269 - 295	°C	
Front Temperature	280 - 300	°C	
Nozzle Temperature	260 - 290	°C	
Processing (Melt) Temp	274 - 294	°C	
Mold Temperature	73.5 - 102	°C	
Injection Pressure	86.1 - 104	MPa	
Holding Pressure	46.8 - 60.2	MPa	
Back Pressure	0.258 - 0.518	MPa	
Screw Speed	45 - 91	rpm	
Injection instructions			

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