

Generic Nylon 6 - Glass Bead

Polyamide 6

Generic

Message:

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General Information			
Filler / Reinforcement	Glass beads		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.26 - 1.38	g/cm ³	ASTM D792
23°C	1.33 - 1.37	g/cm ³	ISO 1183
Molding Shrinkage			
Flow: 23°C	0.45 - 1.7	%	ASTM D955
23°C	0.47 - 1.0	%	ISO 294-4
Water Absorption			
23°C, 24 hr	0.75 - 1.4	%	ASTM D570
23°C, 24 hr	1.0 - 7.0	%	ISO 62
Saturated, 23°C	6.5 - 6.7	%	ISO 62
Equilibrium, 23°C, 50% RH	1.7 - 2.1	%	ISO 62
Viscosity Number	145 - 150	cm ³ /g	ISO 307
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (23°C)	95 - 120		ASTM D785
Durometer Hardness (23°C)	85		ISO 868
Ball Indentation Hardness	172 - 203	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
23°C	4090 - 6000	MPa	ASTM D638
23°C	2900 - 6200	MPa	ISO 527-2
Tensile Strength			
Yield, 23°C	50.0 - 100	MPa	ASTM D638
Yield, 23°C	40.0 - 103	MPa	ISO 527-2
Fracture, 23°C	59.9 - 80.5	MPa	ASTM D638
Fracture, 23°C	53.1 - 116	MPa	ISO 527-2
23°C	69.8 - 103	MPa	ASTM D638
Tensile Strain			
Yield, 23°C	1.6 - 20	%	ISO 527-2
Fracture, 23°C	1.7 - 13	%	ASTM D638
Fracture, 23°C	1.5 - 11	%	ISO 527-2

Flexural Modulus			
23°C	3170 - 4570	MPa	ASTM D790
23°C	2630 - 5250	MPa	ISO 178
Flexural Strength			
23°C	99.5 - 162	MPa	ASTM D790
23°C	77.6 - 160	MPa	ISO 178
Fracture, 23°C	99.0 - 142	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	3.0 - 7.0	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength (23°C)	17 - 60	kJ/m ²	ISO 179
Notched Izod Impact			
23°C	29 - 75	J/m	ASTM D256
23°C	3.0 - 6.2	kJ/m ²	ISO 180
Unnotched Izod Impact			
23°C	200 - 550	J/m	ASTM D256
23°C	25 - 40	kJ/m ²	ISO 180
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, not annealed	188 - 202	°C	ASTM D648
0.45 MPa, not annealed	167 - 217	°C	ISO 75-2/B
1.8 MPa, not annealed	69.6 - 201	°C	ASTM D648
1.8 MPa, not annealed	60.0 - 203	°C	ISO 75-2/A
Continuous Use Temperature	80.0 - 160	°C	ASTM D794
Vicat Softening Temperature	198 - 206	°C	ISO 306
Melting Temperature			
--	215 - 223	°C	
--	218 - 222	°C	ISO 11357-3
--	218 - 219	°C	ASTM D3418
--	220 - 222	°C	ISO 3146
Linear thermal expansion coefficient			
Flow	4.5E-5 - 6.0E-5	cm/cm/°C	ASTM D696
Flow	2.4E-5 - 9.1E-5	cm/cm/°C	ISO 11359-2
Lateral	7.9E-5 - 9.0E-5	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+8 - 2.5E+14	ohms	IEC 60093
Volume Resistivity			
23°C	1.0E+14 - 6.1E+15	ohms · cm	ASTM D257
23°C	11 - 2.5E+15	ohms · cm	IEC 60093
Dielectric Strength			
23°C	14 - 21	kV/mm	ASTM D149
23°C	10 - 36	kV/mm	IEC 60243-1
Relative Permittivity (23°C)	3.75		IEC 60250

Dissipation Factor (23°C)	0.020		IEC 60250
Comparative Tracking Index	443 - 556	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Glow Wire Flammability Index	642 - 960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature	650 - 960	°C	IEC 60695-2-13
Oxygen Index	22 - 24	%	ISO 4589-2
Injection	Nominal Value	Unit	
Drying Temperature	79.8 - 90.3	°C	
Drying Time	2.0 - 11	hr	
Suggested Max Moisture	0.089 - 0.25	%	
Suggested Max Regrind	15	%	
Rear Temperature	239 - 282	°C	
Middle Temperature	246 - 282	°C	
Front Temperature	246 - 283	°C	
Processing (Melt) Temp	256 - 281	°C	
Mold Temperature	69.4 - 100	°C	
Injection Pressure	70.8 - 95.1	MPa	
Holding Pressure	42.8 - 60.2	MPa	
Back Pressure	0.172 - 0.525	MPa	
Screw Speed	45 - 125	rpm	

Injection instructions

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

