

Generic Nylon 66/6

Polyamide 66/6 Copolymer

Generic

Message:

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General Information			
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.07 - 1.14	g/cm³	ASTM D792
23°C	1.11 - 1.17	g/cm³	ISO 1183
Apparent Density	0.70 - 0.78	g/cm³	ISO 60
Melt Mass-Flow Rate (MFR) (235°C/1.0 kg)	1.2 - 5.0	g/10 min	ASTM D1238
Molding Shrinkage			
Flow: 23°C	0.60 - 2.5	%	ASTM D955
23°C	0.70 - 2.2	%	ISO 294-4
Water Absorption			
23°C, 24 hr	1.1 - 1.7	%	ASTM D570
23°C, 24 hr	1.1 - 1.6	%	ISO 62
Saturated, 23°C	9.0	%	ASTM D570
Saturated, 23°C	7.9 - 11	%	ISO 62
Equilibrium, 23°C	2.5	%	ASTM D570
Equilibrium, 23°C, 50% RH	2.5 - 3.5	%	ISO 62
Viscosity Number	138 - 247	cm³/g	ISO 307
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (23°C)	77 - 80		ISO 868
Ball Indentation Hardness	45.0 - 201	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	477 - 10500	MPa	ISO 527-2
Tensile Strength			
Yield, 23°C	64.8 - 85.4	MPa	ASTM D638
Yield, 23°C	39.1 - 89.3	MPa	ISO 527-2
Fracture, 23°C	79.5 - 85.0	MPa	ASTM D638
Fracture, 23°C	40.0 - 172	MPa	ISO 527-2
23°C	38.6 - 73.4	MPa	ASTM D638
Tensile Strain			
Yield, 23°C	3.0 - 21	%	ISO 527-2
Fracture, 23°C	3.0 - 77	%	ASTM D638
Fracture, 23°C	2.2 - 12	%	ISO 527-2

Nominal Tensile Strain at Break (23°C)	5.6 - 50	%	ISO 527-2
Flexural Modulus			
23°C	800 - 3670	MPa	ASTM D790
23°C	600 - 4920	MPa	ISO 178
Flexural Strength			
23°C	51.5 - 131	MPa	ASTM D790
23°C	25.0 - 196	MPa	ISO 178
Coefficient of Friction	0.30 - 1.0		ASTM D1894
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	2.5 - 21	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength (23°C)	48 - 110	kJ/m ²	ISO 179
Notched Izod Impact			
23°C	35 - 76	J/m	ASTM D256
23°C	4.0 - 22	kJ/m ²	ISO 180
Notched Izod Impact (23°C)	9.00 - 28.0	kJ/m ²	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, not annealed	184 - 225	°C	ASTM D648
0.45 MPa, not annealed	69.6 - 221	°C	ISO 75-2/B
1.8 MPa, not annealed	66.8 - 93.6	°C	ASTM D648
1.8 MPa, not annealed	55.0 - 91.0	°C	ISO 75-2/A
Continuous Use Temperature	87.0 - 203	°C	ASTM D794
Vicat Softening Temperature	68.0 - 248	°C	ISO 306
Melting Temperature			
--	199 - 250	°C	
--	193 - 260	°C	ISO 11357-3
--	190 - 257	°C	ISO 3146
Linear thermal expansion coefficient			
Flow	6.9E-5 - 8.0E-5	cm/cm/°C	ASTM D696
Flow	6.9E-5 - 1.2E-4	cm/cm/°C	ISO 11359-2
Lateral	7.0E-5 - 1.5E-4	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+2 - 2.5E+13	ohms	IEC 60093
Volume Resistivity			
23°C	55 - 1.1E+15	ohms·cm	ASTM D257
23°C	1.0E+4 - 2.5E+15	ohms·cm	IEC 60093
Dielectric Strength			
23°C	17 - 26	kV/mm	ASTM D149
23°C	17 - 35	kV/mm	IEC 60243-1
Relative Permittivity (23°C)	3.50		IEC 60250
Dissipation Factor (23°C)	0.020 - 0.30		IEC 60250
Comparative Tracking Index	497 - 600	V	IEC 60112

Flammability	Nominal Value	Unit	Test Method
Glow Wire Flammability Index	952 - 960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature	743 - 960	°C	IEC 60695-2-13
Oxygen Index	21 - 28	%	ISO 4589-2

Injection	Nominal Value	Unit
Drying Temperature	79.8 - 93.0	°C
Drying Time	2.7 - 7.4	hr
Suggested Max Moisture	0.12 - 0.27	%
Rear Temperature	236 - 270	°C
Middle Temperature	254 - 278	°C
Front Temperature	257 - 276	°C
Processing (Melt) Temp	233 - 281	°C
Mold Temperature	59.9 - 80.9	°C
Injection Pressure	8.00 - 90.8	MPa
Holding Pressure	6.85 - 30.8	MPa

Injection instructions

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Extrusion	Nominal Value	Unit
Drying Temperature	79.6 - 80.0	°C
Suggested Max Moisture	0.080 - 0.081	%
Cylinder Zone 1 Temp.	238	°C
Cylinder Zone 2 Temp.	238	°C
Cylinder Zone 3 Temp.	238	°C
Cylinder Zone 4 Temp.	238	°C
Melt Temperature	248	°C
Die Temperature	240	°C

Extrusion instructions

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