

Generic Nylon 66 - Aramid Fiber

Polyamide 66

Generic

Message:

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General Information			
Filler / Reinforcement	Aramid fiber		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.15 - 1.27	g/cm ³	ASTM D792
23°C	1.22 - 1.25	g/cm ³	ISO 1183
Molding Shrinkage			
Flow: 23°C	0.34 - 2.0	%	ASTM D955
Transverse flow: 23°C	2.0 - 2.1	%	ASTM D955
23°C	0.95 - 2.0	%	ISO 294-4
Water Absorption			
23°C, 24 hr	0.48 - 1.0	%	ASTM D570
23°C, 24 hr	1.0	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (23°C)	120		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
23°C	2960 - 9470	MPa	ASTM D638
23°C	3420 - 4170	MPa	ISO 527-2
Tensile Strength			
Fracture, 23°C	80.7 - 93.0	MPa	ASTM D638
Fracture, 23°C	68.9 - 100	MPa	ISO 527-2
23°C	57.9 - 130	MPa	ASTM D638
Tensile Elongation			
Yield, 23°C	2.5 - 8.3	%	ASTM D638
Yield, 23°C	3.0 - 6.0	%	ISO 527-2
Fracture, 23°C	3.9 - 8.2	%	ASTM D638
Fracture, 23°C	3.3 - 9.5	%	ISO 527-2
Flexural Modulus			
23°C	2700 - 3960	MPa	ASTM D790
23°C	3000 - 3550	MPa	ISO 178
Flexural Strength			
23°C	109 - 143	MPa	ASTM D790

23°C	106 - 120	MPa	ISO 178
Coefficient of Friction	0.11 - 0.56		ASTM D1894
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	2.0 - 4.3	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength (23°C)	15 - 50	kJ/m ²	ISO 179
Notched Izod Impact			
23°C	40 - 140	J/m	ASTM D256
23°C	3.9 - 5.8	kJ/m ²	ISO 180
Unnotched Izod Impact			
23°C	460 - 760	J/m	ASTM D256
23°C	25 - 49	kJ/m ²	ISO 180
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, not annealed	232 - 250	°C	ASTM D648
0.45 MPa, not annealed	239 - 247	°C	ISO 75-2/B
1.8 MPa, not annealed	135 - 247	°C	ASTM D648
1.8 MPa, not annealed	87.6 - 246	°C	ISO 75-2/A
Continuous Use Temperature	109 - 121	°C	ASTM D794
Vicat Softening Temperature	200 - 260	°C	ISO 306
Linear thermal expansion coefficient			
Flow	3.5E-5 - 6.7E-5	cm/cm/°C	ASTM D696
Flow	6.7E-5 - 7.4E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Lateral	8.1E-5 - 9.7E-5	cm/cm/°C	ASTM E831
Lateral	8.3E-5 - 9.8E-5	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	9.8E+12 - 1.0E+13	ohms	IEC 60093
Volume Resistivity (23°C)	1.0E+2 - 7.5E+15	ohms·cm	ASTM D257
Insulation Resistance (23°C)	9.8E+11 - 1.0E+12	ohms	IEC 60167
Injection	Nominal Value	Unit	
Drying Temperature	75.0 - 105	°C	
Drying Time	3.8 - 11	hr	
Suggested Max Moisture	0.20	%	
Rear Temperature	271 - 300	°C	
Middle Temperature	281 - 300	°C	
Front Temperature	281 - 301	°C	
Nozzle Temperature	290	°C	
Processing (Melt) Temp	282 - 290	°C	
Mold Temperature	86.3 - 105	°C	
Injection Pressure	96.5 - 110	MPa	
Back Pressure	0.254 - 0.262	MPa	
Injection instructions			

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