

Generic Acetal (POM) Copolymer - Carbon Fiber

Acetal (POM) Copolymer

Generic

Message:

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General Information			
Filler / Reinforcement	Carbon fiber reinforced material		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.42 - 1.58	g/cm ³	ASTM D792
23°C	1.42 - 1.50	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	3.0 - 19	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (190°C/2.16 kg)	2.00 - 2.45	cm ³ /10min	ISO 1133
Molding Shrinkage			
Flow: 23°C	0.10 - 0.73	%	ASTM D955
23°C	0.35 - 1.2	%	ISO 294-4
Water Absorption			
23°C, 24 hr	0.19 - 0.26	%	ASTM D570
23°C, 24 hr	0.10 - 0.11	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
23°C	7390 - 17500	MPa	ASTM D638
23°C	6970 - 17300	MPa	ISO 527-2
Tensile Strength			
Yield, 23°C	55.0 - 148	MPa	ASTM D638
Yield, 23°C	51.0 - 140	MPa	ISO 527-2
Fracture, 23°C	62.3 - 121	MPa	ASTM D638
Fracture, 23°C	68.8 - 170	MPa	ISO 527-2
23°C	66.2 - 133	MPa	ASTM D638
Tensile Elongation			
Yield, 23°C	1.4 - 2.8	%	ASTM D638
Yield, 23°C	0.70 - 3.1	%	ISO 527-2
Fracture, 23°C	1.0 - 2.6	%	ASTM D638
Fracture, 23°C	0.80 - 4.1	%	ISO 527-2
Flexural Modulus			
23°C	6470 - 13800	MPa	ASTM D790
23°C	5750 - 16200	MPa	ISO 178

Flexural Strength			
23°C	95.2 - 237	MPa	ASTM D790
23°C	57.5 - 210	MPa	ISO 178
Coefficient of Friction	0.11 - 0.37		ASTM D1894
Wear Factor	5.0 - 10000	10 ⁻⁸ mm ³ /N·m	ASTM D3702
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	3.0 - 5.1	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength (23°C)	14 - 100	kJ/m ²	ISO 179
Notched Izod Impact			
23°C	32 - 70	J/m	ASTM D256
23°C	3.7 - 5.1	kJ/m ²	ISO 180
Unnotched Izod Impact			
23°C	130 - 540	J/m	ASTM D256
23°C	15 - 35	kJ/m ²	ISO 180
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, not annealed	160 - 166	°C	ASTM D648
1.8 MPa, not annealed	133 - 163	°C	ASTM D648
1.8 MPa, not annealed	153 - 163	°C	ISO 75-2/A
Continuous Use Temperature	99.6 - 100	°C	ASTM D794
Vicat Softening Temperature	160 - 165	°C	ISO 306
Linear thermal expansion coefficient			
Flow	1.5E-6 - 6.3E-5	cm/cm/°C	ASTM D696
Flow	1.8E-5 - 6.0E-5	cm/cm/°C	ISO 11359-2
Lateral	2.7E-5 - 1.2E-4	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity			
--	1.0E+2 - 1.3E+12	ohms	ASTM D257
--	10 - 2.5E+9	ohms	IEC 60093
Volume Resistivity			
23°C	1.0 - 1.3E+5	ohms·cm	ASTM D257
23°C	30 - 2.5E+5	ohms·cm	IEC 60093
Insulation Resistance (23°C)	10 - 2.5E+9	ohms	IEC 60167
Injection	Nominal Value	Unit	
Drying Temperature	74.9 - 121	°C	
Drying Time	1.9 - 5.0	hr	
Rear Temperature	182 - 183	°C	
Middle Temperature	195 - 199	°C	
Front Temperature	190 - 216	°C	
Nozzle Temperature	188	°C	
Processing (Melt) Temp	200 - 201	°C	
Mold Temperature	93.1 - 100	°C	

Injection Pressure	85.8 - 86.4	MPa
Back Pressure	0.250 - 0.568	MPa
Screw Speed	45 - 47	rpm

Injection instructions

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