

Generic Acetal (POM) Homopolymer

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Generic

Message:

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General Information			
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.40 - 1.42	g/cm³	ASTM D792
23°C	1.42	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR)			
190°C/2.16 kg	1.0 - 11	g/10 min	ASTM D1238
190°C/2.16 kg	1.7 - 16	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (190°C/2.16 kg)	1.70 - 21.0	cm³/10min	ISO 1133
Molding Shrinkage			
Flow: 23°C	1.9 - 2.5	%	ASTM D955
Transverse flow: 23°C	1.8 - 2.1	%	ASTM D955
23°C	1.7 - 2.1	%	ISO 294-4
Water Absorption			
23°C, 24 hr	0.16 - 0.26	%	ASTM D570
23°C, 24 hr	0.18 - 0.66	%	ISO 62
Saturated, 23°C	0.26 - 1.8	%	ASTM D570
Saturated, 23°C	0.72 - 1.4	%	ISO 62
Equilibrium, 23°C, 50% RH	0.17 - 0.31	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			
23°C	80 - 121		ASTM D785
23°C	91 - 120		ISO 2039-2
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
23°C	2190 - 3140	MPa	ASTM D638
23°C	2640 - 3420	MPa	ISO 527-2
Tensile Strength			
Yield, 23°C	44.1 - 72.9	MPa	ASTM D638
Yield, 23°C	70.0 - 72.3	MPa	ISO 527-2
Fracture, 23°C	48.3 - 67.6	MPa	ASTM D638
Fracture, 23°C	44.5 - 53.2	MPa	ISO 527-2
23°C	60.6 - 73.3	MPa	ASTM D638

Tensile Elongation			
Yield, 23°C	10 - 11	%	ASTM D638
Yield, 23°C	9.8 - 28	%	ISO 527-2
Fracture, 23°C	3.0 - 80	%	ASTM D638
Fracture, 23°C	9.3 - 65	%	ISO 527-2
Nominal Tensile Strain at Break (23°C)	19 - 50	%	ISO 527-2
Tensile Creep Modulus			ISO 899-1
1 hr	2590	MPa	ISO 899-1
1000 hr	807	MPa	ISO 899-1
Flexural Modulus			
23°C	2110 - 3200	MPa	ASTM D790
23°C	2700 - 3140	MPa	ISO 178
Flexural Strength			
23°C	75.6 - 109	MPa	ASTM D790
23°C	34.0 - 89.0	MPa	ISO 178
Coefficient of Friction	0.070 - 0.25		ASTM D1894
Taber Abrasion Resistance (23°C)	12.8 - 13.1	mg	ASTM D1044
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	5.2 - 16	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength (23°C)	160 - 310	kJ/m ²	ISO 179
Notched Izod Impact			
23°C	41 - 120	J/m	ASTM D256
23°C	3.0 - 16	kJ/m ²	ISO 180
Unnotched Izod Impact			
23°C	54 - 670	J/m	ASTM D256
23°C	29 - 53	kJ/m ²	ISO 180
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, not annealed	118 - 172	°C	ASTM D648
0.45 MPa, not annealed	157 - 165	°C	ISO 75-2/B
1.8 MPa, not annealed	92.9 - 160	°C	ASTM D648
1.8 MPa, not annealed	71.0 - 111	°C	ISO 75-2/A
Continuous Use Temperature	85.0 - 150	°C	ASTM D794
Melting Temperature			
--	162 - 177	°C	
--	165 - 178	°C	DSC
--	178	°C	ISO 11357-3
--	165 - 177	°C	ASTM D3418
Linear thermal expansion coefficient			
Flow	9.7E-5 - 1.0E-4	cm/cm/°C	ASTM D696
Flow	9.8E-5 - 1.5E-4	cm/cm/°C	ISO 11359-2
Lateral	9.0E-5 - 1.8E-4	cm/cm/°C	ISO 11359-2

Specific Heat (23°C)	1460 - 1470	J/kg/°C	ASTM C351
Thermal Conductivity (23°C)	0.23	W/m/K	ASTM C177
RTI Elec	50.0 - 110	°C	UL 746
RTI Imp	50.0 - 90.0	°C	UL 746
RTI	50.0 - 95.0	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity			
--	1.0E+13 - 5.5E+16	ohms	ASTM D257
--	5.1E+11 - 1.0E+15	ohms	IEC 60093
Volume Resistivity			
23°C	5.5E+9 - 5.5E+15	ohms·cm	ASTM D257
23°C	5.1E+11 - 1.0E+15	ohms·cm	IEC 60093
Dielectric Strength			
23°C	18 - 24	kV/mm	ASTM D149
23°C	20 - 32	kV/mm	IEC 60243-1
Dielectric Constant			
23°C	3.70 - 3.80		ASTM D150
23°C	3.69		IEC 60250
Dissipation Factor			
23°C	3.8E-4 - 7.0E-3		ASTM D150
23°C	2.6E-3 - 0.018		IEC 60250
Arc Resistance	250	sec	ASTM D495
Flammability	Nominal Value	Unit	Test Method
Oxygen Index	20 - 23	%	ISO 4589-2
Injection	Nominal Value	Unit	
Drying Temperature	78.6 - 86.1	°C	
Drying Time	1.9 - 3.1	hr	
Suggested Max Moisture	0.097 - 0.20	%	
Rear Temperature	170 - 199	°C	
Middle Temperature	180 - 205	°C	
Front Temperature	188 - 216	°C	
Nozzle Temperature	190 - 208	°C	
Processing (Melt) Temp	199 - 216	°C	
Mold Temperature	50.0 - 90.1	°C	
Injection Pressure	82.7 - 95.7	MPa	
Back Pressure	0.235 - 1.87	MPa	
Screw Speed	45 - 76	rpm	
Clamp Tonnage	4.0 - 4.5	kN/cm ²	
Cushion	4.76 - 9.53	mm	
Injection instructions			

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