

DELTRIN 510GR NC000

Delrin USA, LLC - Acetal (POM) Homopolymer

General Information

General

Material Status	• Commercial: Active
Availability	• Africa & Middle East • Europe • North America • Asia Pacific • Latin America
Filler / Reinforcement	• Glass Fiber, 10% Filler by Weight
Additive	• Mold Release
Features	• Creep Resistant • High Stiffness • Homopolymer • Good Mold Release • High Strength
RoHS Compliance	• Contact Manufacturer
Part Marking Code (ISO 11469)	• >POM-GF10<
Resin ID (ISO 1043)	• POM-GF10

Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.49	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (190°C/2.16 kg)	12	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	1.4	%	
Flow	1.0	%	
Water Absorption (Saturation, 73°F, 0.0787 in)	1.1	%	ISO 62
Water Absorption (Equilibrium, 73°F, 0.0787 in, 50% RH)	0.16	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	798000	psi	ISO 527-1
Tensile Stress (Break)	15200	psi	ISO 527-2
Tensile Strain (Break)	3.7	%	ISO 527-2
Tensile Creep Modulus (1 hr)	696000	psi	ISO 899-1
Tensile Creep Modulus (1000 hr)	508000	psi	ISO 899-1
Flexural Modulus	761000	psi	ISO 178
Flexural Stress			ISO 178
--	25400	psi	
3.5% Strain	23200	psi	
Poisson's Ratio	0.35		
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	2.4	ft·lb/in ²	
73°F	3.1	ft·lb/in ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F	24	ft·lb/in ²	
73°F	24	ft·lb/in ²	
Notched Izod Impact Strength (73°F)	2.4	ft·lb/in ²	ISO 180/1A
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ISO 2039-2
M-Scale	100		
R-Scale	122		
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	345	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	327	°F	ISO 75-2/A



Vicat Softening Temperature	320 °F	ISO 306/B50
Melting Temperature ²	352 °F	ISO 11357-3
CLTE - Flow	3.9E-5 in/in/°F	ISO 11359-2
CLTE - Transverse	5.6E-5 in/in/°F	ISO 11359-2
RTI Elec (0.030 in)	122 °F	UL 746B
RTI Imp (0.030 in)	122 °F	UL 746B
RTI Str (0.030 in)	122 °F	UL 746B
Annealing Temperature	320 °F	
Annealing Time - Optional	30.0 min/mm	

Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+11	ohms·m	IEC 62631-3-1
Relative Permittivity			IEC 62631-2-1
100 Hz	3.70		
1 MHz	3.90		
Comparative Tracking Index	600 V		IEC 60112

Flammability	Nominal Value	Unit	Test Method
Burning Rate ³ (0.0394 in)	1.8	in/min	ISO 3795
Flame Rating (0.030 in)	HB		UL 94
Flammability Classification (0.030 in)	HB		IEC 60695-11-10, -20
FMVSS Flammability	B		FMVSS 302

Additional Information	Nominal Value	Unit	Test Method
Fogging - G-value (condensate)	0.65	mg	ISO 6452

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	176	°F
Drying Time - Desiccant Dryer	2.0 to 4.0	hr
Suggested Max Moisture	< 0.20	%
Processing (Melt) Temp	410 to 428	°F
Melt Temperature, Optimum	419	°F
Mold Temperature	176 to 212	°F
Mold Temperature, Optimum	194	°F
Holding Pressure	11600 to 14500	psi
Drying Recommended	yes	
Hold Pressure Time	8.00	s/mm
Maximum Screw Tangential Speed	709	in/min

Notes

¹ Typical properties: these are not to be construed as specifications.

² 10°C/min

³ FMVSS 302

