

DELTRIN 500AF

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	• PTFE Fiber, 20% Filler by Weight
Additive	• Mold Release
Features	• Good Mold Release • Low Friction • Wear Resistant • Homopolymer • Medium-high Viscosity
RoHS Compliance	• Contact Manufacturer
Automotive Specifications	• ASTM D6778 POM0100 • GM GMW15702-003531 • IMDS ID 15027349 Color: Natural A22220 • GM GMW15702-003531 • STELLANTIS MS-DB-428 • FORD WSB-M4D912-A • GM GMP.POM.014 • IMDS ID 15027349 Color: Black • GM GMP.POM.014 • IMDS ID 15027349 Color: Black
Appearance	• Brown
Part Marking Code (ISO 11469)	• >POM-SF20<
Resin ID (ISO 1043)	• POM-SF20

Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.53	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	5.0	g/10 min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	1.4	%	
Flow	2.0	%	
Water Absorption (24 hr, 73°F)	0.25	%	ISO 62
Water Absorption (Saturation, 73°F, 0.0787 in)	1.0	%	ISO 62
Water Absorption (Equilibrium, 73°F, 0.0787 in, 50% RH)	0.20	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	406000	psi	ISO 527-1
Tensile Stress (Break)	7250	psi	ISO 527-2
Tensile Strain (Break)	10	%	ISO 527-2
Flexural Modulus	363000	psi	ISO 178
Compressive Stress	16000	psi	ISO 604
Poisson's Ratio	0.37		
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	1.4	ft·lb/in ²	
73°F	1.4	ft·lb/in ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F	17	ft·lb/in ²	
73°F	19	ft·lb/in ²	
Notched Izod Impact Strength (73°F)	1.4	ft·lb/in ²	ISO 180/1A
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ISO 2039-2
M-Scale	74		
R-Scale	119		



Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	320	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	198	°F	ISO 75-2/A
Melting Temperature ²	352	°F	ISO 11357-3
CLTE - Flow	6.1E-5	in/in/°F	ISO 11359-2
CLTE - Transverse	5.6E-5	in/in/°F	ISO 11359-2
RTI Elec			UL 746B
0.06 in	221	°F	
0.12 in	221	°F	
RTI Imp			UL 746B
0.06 in	185	°F	
0.12 in	185	°F	
RTI Str			UL 746B
0.06 in	194	°F	
0.12 in	194	°F	
Annealing Temperature	320	°F	
Annealing Time - Optional	30.0	min/mm	
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 62631-3-2
Relative Permittivity (1 MHz)	3.10		IEC 62631-2-1
Dissipation Factor (1 MHz)	9.0E-3		IEC 62631-2-1
Comparative Tracking Index	600	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.06 in	HB		
0.12 in	HB		
Flammability Classification			IEC 60695-11-10, -20
0.06 in	HB		
0.12 in	HB		
Glow Wire Flammability Index (0.12 in)	1110	°F	IEC 60695-2-12
FMVSS Flammability	B		FMVSS 302
Fill Analysis	Nominal Value	Unit	Test Method
Melt Density	1.28	g/cm ³	

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
Extrusion	Nominal Value	Unit
Drying Temperature	167 to 185	°F
Drying Time	2.0 to 4.0	hr
Suggested Max Moisture	< 0.20	%
Melt Temperature	383 to 401	°F
Extrusion Melt Temperature, Optimum	392	°F

Notes

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

² 10°C/min

