

DELTRIN 111DP BK402

Delrin USA, LLC - Acetal (POM) Homopolymer

General Information
General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East	• Europe	• North America
	• Asia Pacific	• Latin America	
Additive	• Mold Release		
Features	• Creep Resistant	• Good Mold Release	• Homopolymer
	• Crystalline	• Good Thermal Stability	• Low Warpage
	• Fast Molding Cycle	• High Dimensional Stability	
	• Fatigue Resistant	• High Viscosity	
RoHS Compliance	• Contact Manufacturer		
Part Marking Code (ISO 11469)	• >POM<		
Resin ID (ISO 1043)	• POM		

Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.42	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	2.6	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (190°C/2.16 kg)	2.2	cm ³ /10min	ISO 1133
Molding Shrinkage ²			ISO 294-4
Across Flow	1.9	%	
Flow	2.1	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	479000	psi	ISO 527-1
Tensile Stress (Yield)	10600	psi	ISO 527-2
Tensile Strain (Yield)	19	%	ISO 527-2
Nominal Tensile Strain at Break	35	%	ISO 527-2
Flexural Modulus	435000	psi	ISO 178
Poisson's Ratio	0.37		
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (73°F)	4.5	ft·lb/in ²	ISO 179/1eA
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ISO 2039-2
M-Scale	92		
R-Scale	121		
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	327	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	207	°F	ISO 75-2/A
Melting Temperature ³	352	°F	ISO 11357-3
CLTE - Flow	6.1E-5	in/in/°F	ISO 11359-2
CLTE - Transverse	6.1E-5	in/in/°F	ISO 11359-2
RTI Elec			UL 746B
0.030 in	122	°F	
0.06 in	230	°F	
0.12 in	230	°F	
RTI Imp			UL 746B
0.030 in	122	°F	
0.06 in	185	°F	



0.12 in	194 °F	
RTI Str		UL 746B
0.030 in	122 °F	
0.06 in	194 °F	
0.12 in	203 °F	
Annealing Temperature	320 °F	
Annealing Time - Optional	30.0 min/mm	
Flammability	Nominal Value Unit	Test Method
Burning Rate ⁴ (0.0394 in)	1.1 in/min	ISO 3795
Flame Rating		UL 94
0.031 in	HB	
0.06 in	HB	
Flammability Classification		IEC 60695-11-10, -20
0.03 in	HB	
0.06 in	HB	
FMVSS Flammability	B	FMVSS 302
Fill Analysis	Nominal Value Unit	Test Method
Melt Density	1.16 g/cm ³	
Additional Information	Nominal Value Unit	Test Method
Emission	< 8 ppm	VDA 275

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	13100 to 16000 psi
Drying Recommended	yes
Hold Pressure Time	7.50 s/mm
Maximum Screw Tangential Speed	472 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 Derived from Similar Grade

³ 10°C/min

⁴ FMVSS 302

