

DELTRIN 100AL NC010

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	• Lubricant • Mold Release
Features	• Good Mold Release • Low Friction • Wear Resistant • Homopolymer • Lubricated
RoHS Compliance	• Contact Manufacturer
Automotive Specifications	• GM QK 005311 S
Part Marking Code (ISO 11469)	• >POM-S<
Resin ID (ISO 1043)	• POM-S

Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.40	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	2.5	g/10 min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	1.7	%	
Flow	2.0	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	435000	psi	ISO 527-1
Tensile Stress (Yield)	10200	psi	ISO 527-2
Tensile Strain (Yield)	18	%	ISO 527-2
Nominal Tensile Strain at Break	40	%	ISO 527-2
Tensile Creep Modulus (1 hr)	392000	psi	ISO 899-1
Tensile Creep Modulus (1000 hr)	218000	psi	ISO 899-1
Flexural Modulus	406000	psi	ISO 178
Poisson's Ratio	0.37		
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	3.6	ft·lb/in ²	
73°F	5.0	ft·lb/in ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F	95	ft·lb/in ²	
73°F	No Break		
Notched Izod Impact Strength (73°F)	3.8	ft·lb/in ²	ISO 180/1A
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ISO 2039-2
M-Scale	90		
R-Scale	122		
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	325	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	207	°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	6.1E-5	in/in/°F	ISO 11359-2
RTI Elec			UL 746B



0.030 in	122 °F	
0.12 in	122 °F	
RTI Imp		UL 746B
0.030 in	122 °F	
0.12 in	122 °F	
RTI Str		UL 746B
0.030 in	122 °F	
0.12 in	122 °F	
Annealing Temperature	320 °F	
Annealing Time - Optional	30.0 min/mm	
Flammability	Nominal Value Unit	Test Method
Burning Rate ³ (0.0394 in)	1.0 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
Additional Information	Nominal Value Unit	Test Method
Emission	< 8 ppm	VDA 275
Fogging - G-value (condensate)	0.10 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	13100 to 16000 psi
Drying Recommended	yes
Hold Pressure Time	8.00 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 10°C/min

³ FMVSS 302

