

DELTRIN 100T 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	• Impact Modifier • Mold Release
Features	• Good Mold Release • High Viscosity • Impact Modified • High Toughness • Homopolymer
RoHS Compliance	• Contact Manufacturer
Automotive Specifications	• ASTM D6778 POM0100 B54620
Part Marking Code (ISO 11469)	• >POM-I<
Resin ID (ISO 1043)	• POM-I

Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.37	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	2.1	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (190°C/2.16 kg)	1.9	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	1.5	%	
Flow	1.3	%	
Water Absorption (Saturation, 73°F, 0.0787 in)	0.90	%	ISO 62
Water Absorption (Equilibrium, 73°F, 0.0787 in, 50% RH)	0.30	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	276000	psi	ISO 527-1
Tensile Stress (Yield)	7980	psi	ISO 527-2
Tensile Strain (Yield)	25	%	ISO 527-2
Nominal Tensile Strain at Break	> 50	%	ISO 527-2
Flexural Modulus	247000	psi	ISO 178
Flexural Stress (3.5% Strain)	7540	psi	ISO 178
Poisson's Ratio	0.41		
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	6.7	ft·lb/in ²	
73°F	12	ft·lb/in ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F	No Break		
73°F	No Break		
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ISO 2039-2
M-Scale	59		
R-Scale	113		
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	266	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	162	°F	ISO 75-2/A
Vicat Softening Temperature	343	°F	ISO 306/A50
Melting Temperature ²	352	°F	ISO 11357-3
CLTE - Flow	6.7E-5	in/in/°F	ISO 11359-2



CLTE - Transverse	6.7E-5 in/in/°F	ISO 11359-2
RTI Elec		UL 746B
0.06 in	212 °F	
0.12 in	212 °F	
RTI Imp		UL 746B
0.06 in	185 °F	
0.12 in	185 °F	
RTI Str		UL 746B
0.06 in	185 °F	
0.12 in	185 °F	
Annealing Temperature	320 °F	
Annealing Time - Optional	30.0 min/mm	
Effective Thermal Diffusivity	1.09E-10 in ² /s	

Electrical	Nominal Value Unit	Test Method
Volume Resistivity	6.0E+12 ohms·m	IEC 62631-3-1
Dissipation Factor (1 MHz)	9.0E-3	IEC 62631-2-1
Comparative Tracking Index	600 V	IEC 60112

Flammability	Nominal Value Unit	Test Method
Burning Rate ³ (0.0394 in)	2.2 in/min	ISO 3795
Flame Rating (0.06 in)	HB	UL 94
Flammability Classification (0.06 in)	HB	IEC 60695-11-10, -20
Glow Wire Flammability Index		IEC 60695-2-12
0.04 in	1020 °F	
0.08 in	1020 °F	
0.12 in	1020 °F	
FMVSS Flammability	B	FMVSS 302

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	4.0 to 8.0 hr
Suggested Max Moisture	< 0.050 %
Processing (Melt) Temp	392 to 410 °F
Melt Temperature, Optimum	401 °F
Mold Temperature	104 to 140 °F
Mold Temperature, Optimum	122 °F
Holding Pressure	8700 to 11600 psi
Drying Recommended	yes
Hold Pressure Time	7.50 s/mm
Maximum Screw Tangential Speed	472 in/min

Extrusion	Nominal Value Unit
Drying Temperature	176 °F
Drying Time	4.0 to 8.0 hr
Suggested Max Moisture	< 0.050 %
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

