

DELTRIN 500T NC010

Delrin USA, LLC - Acetal (POM) Homopolymer

General Information

General			
Material Status	<ul style="list-style-type: none"> Commercial: Active 		
Availability	<ul style="list-style-type: none"> Africa & Middle East Asia Pacific 	<ul style="list-style-type: none"> Europe Latin America 	<ul style="list-style-type: none"> North America
Additive	<ul style="list-style-type: none"> Impact Modifier Mold Release 		
Features	<ul style="list-style-type: none"> Good Mold Release Homopolymer Impact Modified Medium Viscosity 		
Uses	<ul style="list-style-type: none"> Engineering Parts 		
RoHS Compliance	<ul style="list-style-type: none"> Contact Manufacturer 		
Automotive Specifications	<ul style="list-style-type: none"> FORD WSK-M4D681-A2 GM GMP.POM.016 STELLANTIS MS-DB-100 CPN2939 STELLANTIS MS-DB-100 CPN2979 Color: Color As Noted On Drawing 		
Part Marking Code (ISO 11469)	<ul style="list-style-type: none"> >POM-I< 		
Resin ID (ISO 1043)	<ul style="list-style-type: none"> POM-I 		

Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.38	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	12	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (190°C/2.16 kg)	10	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	1.6	%	
Flow	1.5	%	
Water Absorption (24 hr, 73°F)	0.30	%	ISO 62
Water Absorption (Saturation, 73°F, 0.0787 in)	0.82	%	ISO 62
Water Absorption (Equilibrium, 73°F, 0.0787 in, 50% RH)	0.21	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	334000	psi	ISO 527-1
Tensile Stress (Yield)	7980	psi	ISO 527-2
Tensile Strain (Yield)	18	%	ISO 527-2
Nominal Tensile Strain at Break	35	%	ISO 527-2
Tensile Creep Modulus (1 hr)	334000	psi	ISO 899-1
Tensile Creep Modulus (1000 hr)	174000	psi	ISO 899-1
Flexural Modulus	305000	psi	ISO 178
Flexural Stress (3.5% Strain)	8700	psi	ISO 178
Poisson's Ratio	0.39		
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	4.0	ft·lb/in ²	
73°F	6.2	ft·lb/in ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F	160	ft·lb/in ²	
73°F	No Break		
Notched Izod Impact Strength			ISO 180/1A
-40°F	4.3	ft·lb/in ²	
73°F	6.7	ft·lb/in ²	
Hardness	Nominal Value	Unit	Test Method



Rockwell Hardness		ISO 2039-2
M-Scale	79	
R-Scale	117	
Ball Indentation Hardness (H 961/30)	22500 psi	ISO 2039-1
Thermal	Nominal Value Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	293 °F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	176 °F	ISO 75-2/A
Vicat Softening Temperature		
--	284 °F	ISO 306/B50
--	342 °F	ISO 306/A50
Melting Temperature ²	352 °F	ISO 11357-3
CLTE - Flow	7.2E-5 in/in/°F	ISO 11359-2
CLTE - Transverse	6.7E-5 in/in/°F	ISO 11359-2
RTI Elec		UL 746B
0.030 in	221 °F	
0.06 in	221 °F	
0.12 in	221 °F	
RTI Imp		UL 746B
0.030 in	185 °F	
0.06 in	185 °F	
0.12 in	185 °F	
RTI Str		UL 746B
0.030 in	185 °F	
0.06 in	185 °F	
0.12 in	185 °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
Volume Resistivity	> 1.0E+13 ohms·m	IEC 62631-3-1
Relative Permittivity		IEC 62631-2-1
100 Hz	3.60	
1 MHz	3.60	
Dissipation Factor (1 MHz)	0.016	IEC 62631-2-1
Comparative Tracking Index	600 V	IEC 60112
Flammability	Nominal Value Unit	Test Method
Burning Rate ³ (0.0394 in)	1.6 in/min	ISO 3795
Flame Rating		UL 94
0.030 in	HB	
0.06 in	HB	
Flammability Classification		IEC 60695-11-10, -20
0.030 in	HB	
0.06 in	HB	
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
Fill Analysis	Nominal Value Unit	Test Method
Melt Density	1.18 g/cm ³	
Additional Information	Nominal Value Unit	Test Method
Emission	< 8 ppm	VDA 275
Fogging - G-value (condensate)	0.20 mg	ISO 6452

Processing Information

	Nominal Value	Unit
Injection		
Drying Temperature	176	°F
Desiccant Dryer	4.0 to 8.0	h
Max Moisture	< 0.050	%
Melt Temp	392 to 410	°
Temperature, Optimum	401	°
Temperature	104 to 140	°

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	709 in/min

Notes

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

² 10°C/min

³ FMVSS 302

