

DELTRIN 527UV 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	• Mold Release • UV Stabilizer
Features	• Good Mold Release • Medium Viscosity • Homopolymer • UV Stabilized
Uses	• Automotive Applications
RoHS Compliance	• Contact Manufacturer
Automotive Specifications	• ASTM D6778 POM0132 • GM GMP.POM.007 • FORD WSK-M4D744-A2 • STELLANTIS MS-DB-100 CPN1396
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)	15	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (190°C/2.16 kg)	13	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	1.9	%	
Flow	2.0	%	
Water Absorption (24 hr, 73°F)	0.50	%	ISO 62
Water Absorption (Saturation, 73°F, 0.0787 in)	1.2	%	ISO 62
Water Absorption (Equilibrium, 73°F, 0.0787 in, 50% RH)	0.20	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	450000	psi	ISO 527-1
Tensile Stress (Yield)	10200	psi	ISO 527-2
Tensile Strain (Yield)	17	%	ISO 527-2
Nominal Tensile Strain at Break	30	%	ISO 527-2
Flexural Modulus	435000	psi	ISO 178
Flexural Stress			ISO 178
--	11200	psi	
3.5% Strain	11300	psi	
Poisson's Ratio	0.37		
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	3.8	ft·lb/in ²	
73°F	3.8	ft·lb/in ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F	120	ft·lb/in ²	
73°F	120	ft·lb/in ²	
Notched Izod Impact Strength			ISO 180/1A
-40°F	3.8	ft·lb/in ²	
73°F	4.3	ft·lb/in ²	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ISO 2039-2



M-Scale	92	
R-Scale	120	
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)	194 °F	ISO 75-2/A
Vicat Softening Temperature		
--	320 °F	ISO 306/B50
--	345 °F	ISO 306/A50
Melting Temperature ²	352 °F	ISO 11357-3
CLTE - Flow	6.1E-5 in/in/°F	ISO 11359-2
CLTE - Transverse	6.7E-5 in/in/°F	ISO 11359-2
Thermal Conductivity	2.8 Btu·in/hr/ft ² /°F	ISO 22007-2
RTI Elec (0.030 in)	122 °F	UL 746B
RTI Imp (0.030 in)	122 °F	UL 746B
RTI Str (0.030 in)	122 °F	UL 746B
Annealing Temperature	320 °F	
Annealing Time - Optional	30.0 min/mm	
Electrical	Nominal Value	Unit Test Method
Surface Resistivity	2.0E+13 ohms	IEC 62631-3-2
Volume Resistivity	> 1.0E+13 ohms·m	IEC 62631-3-1
Relative Permittivity		IEC 62631-2-1
100 Hz	3.80	
1 MHz	3.80	
Dissipation Factor		IEC 62631-2-1
100 Hz	2.1E-3	
1 MHz	5.6E-3	
Comparative Tracking Index	600 V	IEC 60112
Flammability	Nominal Value	Unit Test Method
Burning Rate ³ (0.0394 in)	0.83 in/min	ISO 3795
Flame Rating (0.031 in)	HB	UL 94
Flammability Classification (0.03 in)	HB	IEC 60695-11-10, -20
FMVSS Flammability	B	FMVSS 302
Additional Information	Nominal Value	Unit Test Method
Emission	< 8 ppm	VDA 275
Fogging		ISO 6452
F-value (refraction) ⁴	90 %	
G-value (condensate)	0.20 mg	

Processing Information

	Nominal Value	Unit
Injection		
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	

Notes

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

² 10°C/min

³ FMVSS 302

⁴ Assessed (Min)

