DuPont™ Delrin®

acetal resin

Delrin® 127UV NC010

Delrin® 127UV is a high viscosity acetal homopolymer with UV stabilizers developed for automotive interior applications. It has improvements in UV aging characteristics and thermal stability over Delrin ® 107.

Property	Test Method	Units	Value
Identification			
Resin Identification	ISO 1043		POM
Part Marking Code	ISO 11469		>POM<
Mechanical			
Yield Stress	ISO 527	MPa (kpsi)	70 (10.1)
Yield Strain	ISO 527	%	23
Strain at Break	ISO 527	%	
50mm/min			65
Nominal Strain at Break	ISO 527	%	45
Tensile Modulus	ISO 527	MPa (kpsi)	2900 (420)
Flexural Modulus	ISO 178	MPa (kpsi)	2700 (390)
Notched Charpy Impact Strength	ISO 179/1eA	kJ/m^2	
-30°C (-22°F)			11
23°C (73°F)			15
Unnotched Charpy Impact Strength	ISO 179/1eU	kJ/m^2	
-30°C (-22°F)			350
23°C (73°F)			400

Contact DuPont for Material Safety Data Sheet, general guides and/or additional information about ventilation, handling, purging, drying, etc.
ISO Mechanical properties measured at 4.0mm, ISO Electrical properties measured at 2.0mm, and all ASTM properties measured at 3.2mm.
Test temperatures are 23°C unless otherwise stated.

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Property	Test Method	Units	Value
Thermal			
Deflection Temperature	ISO 75-1/-2	°C (°F)	
0.45MPa			160 (320)
1.80MPa			90 (195)
Melting Temperature	ISO 11357-1/-3	°C (°F)	
10°C/min			178 (352)
CLTE, Normal	ISO 11359-1/-2	E-4/C (E-4/F)	
-40 - 23°C (-40 - 73°F)			1.0 (0.55)
23 - 55°C (73 - 130°F)			1.1 (0.62)
55 - 100°C (130 - 212°F)			1.7 (0.93)
CLTE, Parallel	ISO 11359-1/-2	E-4/C (E-4/F)	
-40 - 23°C (-40 - 73°F)			1.0 (0.56)
23 - 55°C (73 - 130°F)			1.2 (0.67)
55 - 100°C (130 - 212°F)			1.6 (0.88)
Vicat Softening Temperature	ISO 306	°C (°F)	
50N			160 (320)
Rheological			
Melt Mass-Flow Rate	ISO 1133	g/10 min	
190°C, 2.16kg			2.4
Electrical			
Volume Resistivity	IEC 60093	ohm m	1E11
Electric Strength	IEC 60243-1	kV/mm	24
1.0mm			32 (812)
Relative Permittivity	IEC 60250		
1E2 Hz			3.5
1E6 Hz			3.4
Dissipation Factor	IEC 60250	E-4	
1E2 Hz			180
1E6 Hz			60
CTI	IEC 60112	V	600

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Property	Test Method	Units	Value
Flammability			
Flammability Classification	IEC 60695-11-10		
0.84mm			HB
Oxygen Index	ISO 4589-1/-2	%	20
Temperature Index			
RTI, Electrical	UL 746B	°C	
0.85mm			50
RTI, Impact	UL 746B	°C	
0.85mm			50
RTI, Strength	UL 746B	°C	
0.85mm			50
Other			
Density	ISO 1183	kg/m^3 (g/cm^3)	1420 (1.42)
Hardness, Rockwell	ISO 2039/2		
Scale M			92
Scale R			120
Water Absorption	ISO 62, Similar to	%	
Equilibrium 50%RH			0.3
Immersion 24h			0.5
Saturation, immersed			1.2
Molding Shrinkage	ISO 294-4	%	
Normal, 2.0mm			1.9
Parallel, 2.0mm			2.1
Processing			
Melt Temperature Range		°C (°F)	210-220 (410-430)
Melt Temperature Optimum		°C (°F)	215 (420)
Mold Temperature Range		°C (°F)	80-100 (175-210)
Mold Temperature Optimum		°C (°F)	90 (195)
Drying Time, Dehumidified Dryer		h	2-4
Drying Temperature		°C (°F)	80 (175)
Processing Moisture Content		%	<0.2
Hold Pressure Range		MPa (kpsi)	90-110 (13-16)

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