

DuPont™ Delrin®

acetal resin

Delrin® 100AL NC010

Delrin® 100AL NC010 an unreinforced, high viscosity, lubricated acetal homopolymer resin, containing an advanced system of lubrication for low wear and friction against metals and plastics.

Property	Test Method	Units	Value
Identification			
Resin Identification	ISO 1043		POM-S
Part Marking Code	ISO 11469		>POM-S<
Mechanical			
Yield Stress	ISO 527	MPa (kpsi)	70 (10)
Yield Strain	ISO 527	%	18
Strain at Break	ISO 527	%	
50mm/min			65
Nominal Strain at Break	ISO 527	%	45
Tensile Modulus	ISO 527	MPa (kpsi)	3000 (435)
Flexural Modulus	ISO 178	MPa (kpsi)	2800 (405)
Notched Charpy Impact Strength	ISO 179/1eA	kJ/m ²	
-30°C (-22°F)			7
23°C (73°F)			9
Unnotched Charpy Impact Strength	ISO 179/1eU	kJ/m ²	
-30°C (-22°F)			170
23°C (73°F)			250

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 0.45MPa	ISO 75-1/-2	°C (°F)	163 (325)
1.80MPa			97 (205)
Melting Temperature 10°C/min	ISO 11357-1/-3	°C (°F)	178 (352)
CLTE, Normal	ISO 11359-1/-2	E-4/C (E-4/F)	
-40 - 23°C (-40 - 73°F)			1.1 (0.61)
23 - 55°C (73 - 130°F)			1.5 (0.83)
55 - 100°C (130 - 212°F)			1.5 (0.83)
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)			1.1 (0.61)
55 - 100°C (130 - 212°F)			1.5 (0.83)
Rheological			
Melt Mass-Flow Rate 190°C, 2.16kg	ISO 1133	g/10 min	2.5
Flammability			
Flammability Classification	IEC 60695-11-10		
0.75mm			HB
1.5mm			HB
3.0mm			HB
Flammability Classification	UL94		
0.75mm			HB
1.5mm			HB
3.0mm			HB

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Property	Test Method	Units	Value
Temperature Index			
RTI, Electrical	UL 746B	°C	50
0.75mm			
1.5mm			
3.0mm	UL 746B	°C	50
RTI, Impact			
0.75mm			
1.5mm	UL 746B	°C	50
3.0mm			
RTI, Strength			
0.75mm	UL 746B	°C	50
1.5mm			
3.0mm			
Other			
Density	ISO 1183	kg/m ³ (g/cm ³)	1400 (1.40)
Molding Shrinkage	ISO 294-4	%	1.8
Normal, 2.0mm			
Parallel, 2.0mm			
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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