

DuPont™ Delrin®

acetal resin

Delrin® 525GR NC000

Delrin® 525GR NC000 is a 25% glass reinforced acetal homopolymer for injection molding. It has very high strength, stiffness, and high deflection temperature, and excellent creep resistance.

Property	Test Method	Units	Value
Identification			
Resin Identification	ISO 1043		POM-GF25
Part Marking Code	ISO 11469		>POM-GF25<
Mechanical			
Stress at Break	ISO 527	MPa (kpsi)	145 (20.3)
Strain at Break	ISO 527	%	3
Tensile Modulus	ISO 527	MPa (kpsi)	9400 (1360)
Flexural Modulus	ISO 178	MPa (kpsi)	8500 (1230)
Notched Charpy Impact Strength	ISO 179/1eA	kJ/m ²	
-30°C (-22°F)			8
23°C (73°F)			8
Unnotched Charpy Impact Strength	ISO 179/1eU	kJ/m ²	
-30°C (-22°F)			50
23°C (73°F)			50

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			176 (349)
1.80MPa			172 (342)
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)			0.86 (0.48)
23 - 55°C (73 - 130°F)			1.0 (0.56)
55 - 100°C (130 - 212°F)			1.5 (0.08)
CLTE, Parallel	ISO 11359-1/-2	E-4/C (E-4/F)	
-40 - 23°C (-40 - 73°F)			0.37 (0.20)
23 - 55°C (73 - 130°F)			0.35 (0.19)
55 - 100°C (130 - 212°F)			0.14 (0.08)
Electrical			
Volume Resistivity	IEC 60093	ohm m	1E12
Electric Strength	IEC 60243-1	kV/mm	29
Relative Permittivity	IEC 60250		
1E2 Hz			3.7
1E6 Hz			3.8
Flammability			
Flammability Classification	IEC 60695-11-10		
0.75mm			HB
Flammability Classification	UL94		
0.75mm			HB
High Amperage Arc Ignition Resistance	UL 746A	arcs	
0.75mm			150
Hot Wire Ignition	UL 746A	s	
0.75mm			8
1.5mm			9
3.0mm			11

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Property	Test Method	Units	Value
Temperature Index			
RTI, Electrical 0.75mm	UL 746B	°C	50
RTI, Impact 0.75mm	UL 746B	°C	50
RTI, Strength 0.75mm	UL 746B	°C	50
Other			
Density	ISO 1183	kg/m ³ (g/cm ³)	1600 (1.60)
Water Absorption Equilibrium 50%RH	ISO 62, Similar to	%	0.17
Saturation, immersed			1.26
Molding Shrinkage	ISO 294-4	%	
Normal, 2.0mm			1.2
Parallel, 2.0mm			0.4
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		%	<0.1
Hold Pressure Range		MPa (kpsi)	80-100 (12-15)

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