DuPont™ Delrin®

acetal resin

PRELIMINARY DATA

Delrin® 510GR NC000

Delrin® 510GR is a 10% glass reinforced acetal homopolymer for injection molding. It has high strength, stiffness, and high deflection temperature and excellent creep resistance.

Property	Test Method	Units	Value
Identification			
Resin Identification	ISO 1043		POM-GF10
Part Marking Code	ISO 11469		>POM-GF10<
Mechanical			
Stress at Break	ISO 527	MPa (kpsi)	95 (14)
Strain at Break	ISO 527	%	4.3
Tensile Modulus	ISO 527	MPa (kpsi)	5500 (800)
Flexural Modulus	ISO 178	MPa (kpsi)	4800 (700)
Notched Charpy Impact Strength	ISO 179/1eA	kJ/m^2	
-30°C (-22°F)			5
23°C (73°F)			5
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.

The above data are preliminary and are subject to change as additional data are developed on subsequent lots.

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Property	Test Method	Units	Value
Thermal			
Deflection Temperature	ISO 75-1/-2	°C (°F)	
0.45MPa			174 (345)
1.80MPa			164 (327)
Melting Temperature	ISO 11357-1/-3	°C (°F)	
10°C/min			178 (352)
CLTE, Parallel	ISO 11359-1/-2	E-4/C (E-4/F)	
23 - 55°C (73 - 130°F)			0.7 (0.39)
CLTE, Normal	ISO 11359-1/-2	E-4/C (E-4/F)	
23 - 55°C (73 - 130°F)			1.0 (0.56)
Electrical			
Volume Resistivity	IEC 60093	ohm m	1E11
Electric Strength	IEC 60243-1	kV/mm	28
Relative Permittivity	IEC 60250		
1E2 Hz			3.7
1E6 Hz			3.9
Dissipation Factor	IEC 60250	E-4	
1E6 Hz			70
CTI	IEC 60112	V	600
Flammability			
Flammability Classification	IEC 60695-11-10		
0.75mm			HB
Flammability Classification	UL94		
0.75mm			HB
Oxygen Index	ISO 4589-1/-2	%	21

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Property	Test Method	Units	Value
Temperature Index			
RTI, Electrical	UL 746B	°C	
0.75mm			50
RTI, Impact	UL 746B	°C	
0.75mm			50
RTI, Strength	UL 746B	°C	
0.75mm			50
Other			
Density	ISO 1183	kg/m^3 (g/cm^3)	1490 (1.49)
Water Absorption	ISO 62, Similar to	%	
Equilibrium 50%RH			0.16
Saturation, immersed			1.1
Molding Shrinkage	ISO 294-4	%	
Normal, 2.0mm			1.4
Parallel, 2.0mm			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		%	<0.1
Hold Pressure Range		MPa (kpsi)	80-100 (12-15)

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