DuPont™ Delrin®

acetal resin

PRELIMINARY DATA

Delrin® FG500TL NC010

Delrin® FG500TL medium viscosity acetal homopolymer resin containing 1.5% Teflon® PTFE Micropowder. It has been developed for consideration into applications such as parts for the food industry.

Property	Test Method	Units	Value
Identification			
Resin Identification	ISO 1043		POM-SD
Part Marking Code	ISO 11469		>POM-SD<
Mechanical			
Yield Stress	ISO 527	MPa (kpsi)	71 (10.3)
Yield Strain	ISO 527	%	13
Nominal Strain at Break	ISO 527	%	20
Tensile Modulus	ISO 527	MPa (kpsi)	3300 (479)
Flexural Modulus	ISO 178	MPa (kpsi)	3100 (450)
Notched Charpy Impact Strength	ISO 179/1eA	kJ/m^2	
-30°C (-22°F)			4
23°C (73°F)			5
Unnotched Charpy Impact Strength	ISO 179/1eU	kJ/m^2	
-30°C (-22°F)			160
23°C (73°F)			170

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			165 (329)
1.80MPa			103 (217)
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)	
-40 - 23°C (-40 - 73°F)			0.90 (0.50)
23 - 55°C (73 - 130°F)			1.0 (0.56)
55 - 100°C (130 - 212°F)			1.4 (0.8)
CLTE, Normal	ISO 11359-1/-2	E-4/C (E-4/F)	
-40 - 23°C (-40 - 73°F)			0.9 (0.5)
23 - 55°C (73 - 130°F)			1.0 (0.56)
55 - 100°C (130 - 212°F)			1.5 (0.8)
Rheological			
Melt Mass-Flow Rate	ISO 1133	g/10 min	
190°C, 2.16kg			14
Melt Volume-Flow Rate	ISO 1133	cm^3/10 min (ml/10 min)	12
Other			
Density	ISO 1183	kg/m^3 (g/cm^3)	1430 (1.43)
Water Absorption	ISO 62, Similar to	%	
Equilibrium 50%RH			0.17
Immersion 24h			0.33
Saturation, immersed			0.9
Molding Shrinkage	ISO 294-4	%	
Normal, 2.0mm			1.7
Parallel, 2.0mm			1.8

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Property	Test Method	Units	Value
Processing - Injection Molding			
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)	80-100 (12-15)

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