DuPont™ Delrin®

acetal resin

PRELIMINARY DATA

Delrin® 500MP NC010

Delrin® 500MP is a medium viscosity acetal homopolymer with an advanced lubricant package that includes Teflon® PTFE Micropowder.It is formulated for low wear, low friction against other plastics, for dimensional stability and low warpage.

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)	70 (10.2)
Yield Strain	ISO 527	%	12
Strain at Break	ISO 527	%	
50mm/min			20
Nominal Strain at Break	ISO 527	%	17
Tensile Modulus	ISO 527	MPa (kpsi)	3300 (480)
Flexural Modulus	ISO 178	MPa (kpsi)	3200 (460)
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)			120
23°C (73°F)			125

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			162 (325)
1.80MPa			100 (212)
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)			0.9 (0.5)
23 - 55°C (73 - 130°F)			1.0 (0.6)
55 - 100°C (130 - 212°F)			1.3 (0.7)
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 (0.6)
55 - 100°C (130 - 212°F)			1.3 (0.7)
Rheological			
Melt Mass-Flow Rate	ISO 1133	g/10 min	
190°C, 2.16kg			13
Flammability			
Flammability Classification	IEC 60695-11-10		
1.5mm			HB
3.0mm			HB
Flammability Classification	UL94		
1.5mm			HB
3.0mm			HB

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Property	Test Method	Units	Value
Temperature Index			
RTI, Electrical	UL 746B	°C	
1.5mm			50
3.0mm			50
RTI, Impact	UL 746B	°C	
1.5mm			50
3.0mm			50
RTI, Strength	UL 746B	°C	
1.5mm			50
3.0mm			50
Other			
Density	ISO 1183	kg/m^3 (g/cm^3)	1440 (1.44)
Molding Shrinkage	ISO 294-4	%	
Normal, 2.0mm			1.6
Parallel, 2.0mm			1.9
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 (194)
Drying Time, Dehumidified Dryer		h	2-4
Drying Temperature		°C (°F)	80 (176)
Processing Moisture Content		%	<0.2
Hold Pressure Range		MPa (kpsi)	80-100 (12-15)

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