



# Delrin®

acetal resin

## Delrin® 500P NC010

Delrin® 500P NC010 is a medium viscosity resin for general purpose use. Delrin® 500P NC010 has improved processing thermal stability compared to Delrin® 500.

Property	Test Method	Units	Value
<b>Mechanical</b>			
Yield Stress	ISO 527-1/-2	MPa	71
Yield Strain	ISO 527-1/-2	%	14
Nominal Strain at Break	ISO 527-1/-2	%	30
Strain at Break	ISO 527-1/-2	%	
50mm/min			40
Tensile Modulus	ISO 527-1/-2	MPa	3200
Tensile Creep Modulus	ISO 899	MPa	
1h			2800
1000h			1600
Flexural Modulus	ISO 178	MPa	2900
Notched Izod Impact	ISO 180/1A	kJ/m2	
-40C			9
23C			9
Notched Charpy Impact	ISO 179/1eA	kJ/m2	
-30C			8
23C			9
Unnotched Charpy Impact	ISO 179/1eU	kJ/m2	
-30C			300
23C			300
<b>Thermal</b>			
Deflection Temperature	ISO 75-1/-2	°C	
0.45MPa			160
1.80MPa			95
1.80MPa, Annealed			110
Melting Temperature	ISO 3146C	°C	178
Vicat Softening Temperature	ISO 306	°C	
50N			157

Contact DuPont for MSDS, general guides and/or additional information about ventilation, handling, purging, drying, etc.  
 Mechanical properties measured at 23°C (73°F) unless otherwise stated.

030421/990929

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Property	Test Method	Units	Value
<b>Flow</b>			
Melt Flow Rate 190C, 2.16kg	ISO 1133	g/10 min	15
<b>Electrical</b>			
Surface Resistivity 1mm	IEC 60093	ohm	1E15
Relative Permittivity 1E2 Hz, 1mm	IEC 60250		3.4
1E6 Hz, 1mm			3.4
Volume Resistivity 1mm	IEC 60093	ohm cm	1E13
Dissipation Factor 1E2 Hz, 1mm	IEC 60250	E-4	200
1E6 Hz, 1mm			60
Electric Strength 1mm	IEC 60243-1	kV/mm	33
CTI 1mm	IEC 60112	V	600
<b>Flammability</b>			
Flammability Classification 0.8mm(0.032in)bar	UL94		HB
Limited Oxygen Index	ISO 4589	%	22
<b>Other</b>			
Density	ISO 1183	kg/m3	1420
Hardness, Rockwell	ISO 2039/2		M92
Humidity Absorption Equilibrium 50%RH	ISO 62, Similar to	%	0.3
Water Absorption Saturation, immersed	ISO 62, Similar to	%	1.4
<b>Processing</b>			
Melt Temperature Range		°C	210-220
Melt Temperature Optimum		°C	215
Drying Time, Dehumidified Dryer		h	2-4
Drying Temperature		°C	80
Processing Moisture Content		%	<0.2
Hold Pressure Range		MPa	80-100

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