



# Delrin®

acetal resin

## Delrin 100ST NC010

Delrin® 100ST NC010 is a super tough, high viscosity acetal homopolymer grade with superior impact resistance. It is designed for highly stressed where outstanding toughness is essential.

Property	Test Method	Units	Value
<b>Mechanical</b>			
Yield Stress	ISO 527-1/-2	MPa	43
Yield Strain	ISO 527-1/-2	%	30
Nominal Strain at Break	ISO 527-1/-2	%	>50
Strain at Break 50mm/min	ISO 527-1/-2	%	>100
Tensile Modulus	ISO 527-1/-2	MPa	1400
Tensile Creep Modulus 1h	ISO 899	MPa	1350
1000h			550
Flexural Modulus	ISO 178	MPa	1050
Notched Izod Impact -40C	ISO 180/1A	kJ/m2	20
23C			90
Notched Charpy Impact -30C	ISO 179/1eA	kJ/m2	20
23C			100
Unnotched Charpy Impact -30C	ISO 179/1eU	kJ/m2	NB
23C			NB
<b>Thermal</b>			
Deflection Temperature 0.45MPa	ISO 75-1/-2	°C	100
1.80MPa			60
1.80MPa, Annealed			70
Melting Temperature	ISO 3146C	°C	178
Vicat Softening Temperature 50N	ISO 306	°C	116

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.

031102/991103

The information provided in this data sheet corresponds to our knowledge on the subject at the date of its publication. This information may be subject to revision as new knowledge and experience becomes available. The data provided fall within the normal range of product properties and relate only to the specific material designated; these data may not be valid for such material used in combination with any other materials or additives or in any process, unless expressly indicated otherwise. The data provided should not be used to establish specification limits or used alone as the basis of design; they are not intended to substitute for any testing you may need to conduct to determine for yourself the suitability of a specific material for your particular purposes. Since DuPont cannot anticipate all variations in actual end-use conditions DuPont makes no warranties and assumes no liability in connection with any use of this information. Nothing in this publication is to be considered as a license to operate under or a recommendation to infringe any patent rights. Caution: Do not use this product in medical applications involving permanent implantation in the human body. For other medical applications see "DuPont Medical Caution Statement", H-51459 or H-50102.

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Property	Test Method	Units	Value
<b>Flow</b>			
Melt Flow Rate 190C, 2.16kg	ISO 1133	g/10 min	2.0
<b>Electrical</b>			
Surface Resistivity 1mm	IEC 60093	ohm	1E14
Relative Permittivity 1E2 Hz, 1mm	IEC 60250		4.7
1E6 Hz, 1mm			4.5
Volume Resistivity 1mm	IEC 60093	ohm cm	1E14
Dissipation Factor 1E2 Hz, 1mm	IEC 60250	E-4	65
1E6 Hz, 1mm			70
Electric Strength 1mm	IEC 60243-1	kV/mm	39
CTI 1mm	IEC 60112	V	600
<b>Flammability</b>			
Flammability Classification 0.8mm(0.032in)bar	UL94		HB
1.5mm			HB
3.0mm			HB
Limited Oxygen Index	ISO 4589	%	21
<b>Other</b>			
Density	ISO 1183	kg/m3	1340
Hardness, Rockwell	ISO 2039/2		M58
Humidity Absorption Equilibrium 50%RH	ISO 62, Similar to	%	0.35
Water Absorption Saturation, immersed	ISO 62, Similar to	%	0.9
<b>Processing</b>			
Melt Temperature Range		°C	200-210
Melt Temperature Optimum		°C	205
Drying Time, Dehumidified Dryer		h	2-4
Drying Temperature		°C	80
Processing Moisture Content		%	<0.05
Hold Pressure Range		MPa	60-80

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