



Delrin®

acetal resin

Delrin® 500P NC010

Medium Viscosity Acetal

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

Property	Test Method	Units	Value
Mechanical			
Tensile Strength at Yield 5mm/min (0.2in/min)	ASTM D 638	MPa (kpsi)	68 (9.9)
Elongation at Yield 5mm/min (0.2in/min)	ASTM D 638	%	15
Elongation at Break 5mm/min (0.2in/min)	ASTM D 638	%	40
Tensile Modulus 5mm/min (0.2in/min)	ASTM D 638	MPa (kpsi)	3250 (470)
Flexural Modulus	ASTM D 790	MPa (kpsi)	3100 (450)
Flexural Stress Strain 5%	ASTM D 790	MPa (kpsi)	99 (14.3)
Izod Impact	ASTM D 256	J/m (ft lb/in)	75 (1.4)
Unnotched Impact	ASTM D 4812	J/m (ft lb/in)	NB
Thermal			
Heat Deflection Temperature 0.45MPa (66psi), Not Annealed	ASTM D 648	°C (°F)	167 (332)
1.8MPa (264psi), Not Annealed			102 (216)
CLTE, Parallel 23 - 55C (73 - 130F)	ASTM E 831	E-4/C	1.13
CLTE, Normal 23 - 55C (73 - 130F)	ASTM E 831	E-4/C	1.09
Melting Point	ASTM D 3418	°C (°F)	178 (352)
Flow			
Melt Flow Rate 1.05kg at 190C	ASTM D 1238	g/10 min	7

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

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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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Product Information

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Property	Test Method	Units	Value
Electrical			
Surface Resistivity	ASTM D 257	ohm	2 E14
Volume Resistivity	ASTM D 257	ohm cm	1 E14
Dielectric Strength, Short Time 3.2mm (0.126in)	ASTM D 149	kV/mm (V/mil)	17.3 (440)
Dielectric Constant 1E6 Hz	ASTM D 150		3.7
Dissipation Factor 1E6 Hz	ASTM D 150		0.005
Flammability			
Rating @ Min. Thickness			HB
Min. Thickness Tested		mm (in)	0.75 (0.03)
Other			
Specific Gravity	ASTM D 792		1.42
Water Absorption Equilibrium 50%RH Immersion 24h Saturation	ASTM D 570	%	0.28 0.4 1.4
Mold Shrinkage Flow, 24h, 3.2mm (0.126in) Transverse, 24h, 3.2mm (0.126in)	ASTM D 955	%	1.8-2.1 1.8-2.1
Processing			
Melt Temperature Range		°C (°F)	210-220 (410-430)
Mold Temperature Range		°C (°F)	80-100 (175-210)
Processing Moisture Content		%	<0.2

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