



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 Break 5mm/min (0.2in/min)	ASTM D 638	%	40
Elongation at Yield 5mm/min (0.2in/min)	ASTM D 638	%	15
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, Flow 23 - 55C (73 - 130F)	ASTM E 831	E-4/K (E-4/F)	1.13 (0.63)
CLTE, Transverse 23 - 55C (73 - 130F)	ASTM E 831	E-4/K (E-4/F)	1.09 (0.61)
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 MSDS, 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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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			
UL94 Rating at Min. Thickness			HB
UL94 Min. Thickness Tested		mm (in)	0.75 (0.03)
Other			
Specific Gravity	ASTM D 792		1.42
Water Absorption Equilibrium 50%RH	ASTM D 570	%	0.28
Immersion 24hr			0.4
Saturation			1.4
Mold Shrinkage Flow, 24hrs, 3.2mm (0.126in)	ASTM D 955	%	1.8-2.1
Transverse, 24hrs, 3.2mm (0.126in)			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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