Delrin®

acetal resin

Delrin® 500CL NC010

Chemically Lubricated, Medium Viscosity Acetal

Delrin® 500CL is a medium viscosity grade containing a chemical lubricant, designed for low wear and friction against metals.

Property	Test Method	Units	Value
Mechanical			
Tensile Strength at Yield	ASTM D 638	MPa (kpsi)	
5mm/min (0.2in/min)			65 (9.5)
Elongation at Yield	ASTM D 638	%	
5mm/min (0.2in/min)			14
Elongation at Break	ASTM D 638	%	
5mm/min (0.2in/min)			40
Tensile Modulus	ASTM D 638	MPa (kpsi)	
5mm/min (0.2in/min)			3250 (470)
Flexural Modulus	ASTM D 790	MPa (kpsi)	3000 (435)
Flexural Stress	ASTM D 790	MPa (kpsi)	
Strain 5%			90 (13)
Izod Impact	ASTM D 256	J/m (ft lb/in)	70 (1.3)
Unnotched Impact	ASTM D 4812	J/m (ft lb/in)	2610 (48.8)
Thermal			
Heat Deflection Temperature	ASTM D 648	°C (°F)	
0.45MPa (66psi), Not Annealed			166 (331)
1.8MPa (264psi), Not Annealed			105 (221)
CLTE, Parallel	ASTM E 831	E-4/C	
23 - 55C (73 - 130F)			1.12
CLTE, Normal	ASTM E 831	E-4/C	
23 - 55C (73 - 130F)			1.14
Melting Point	ASTM D 3418	°C (°F)	178 (352)
Flow			
Melt Flow Rate	ASTM D 1238	g/10 min	
1.05kg at 190C			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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Property	Test Method	Units	Value
Electrical			
Surface Resistivity	ASTM D 257	ohm	6 E15
Volume Resistivity	ASTM D 257	ohm cm	4 E15
Dielectric Strength, Short Time	ASTM D 149	kV/mm (V/mil)	
3.2mm (0.126in)			17.3 (440)
Dielectric Constant	ASTM D 150		
1E6 Hz			3.6
Dissipation Factor	ASTM D 150		
1E6 Hz			0.007
Flammability			
Rating @ Min. Thickness			HB
Min. Thickness Tested		mm (in)	0.75 (0.03)
Other			
Specific Gravity	ASTM D 792		1.42
Water Absorption	ASTM D 570	%	
Equilibrium 50%RH			0.24
Immersion 24h			0.27
Saturation			1.0
Mold Shrinkage	ASTM D 955	%	
Flow, 24h, 3.2mm (0.126in)			1.7-2.0
Transverse, 24h, 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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