

Delrin® 500CL NC010

ACETAL RESIN

DuPont Performance Polymers

Message:

Lubricated Medium Viscosity Acetal Homopolymer with Low Wear and Low Friction

General Information			
UL YellowCard	E41938-257637		
Additive	Lubricant Mold Release		
Features	Lubricated		
Agency Ratings	UL Unspecified Rating		
Forms	Pellets		
Processing Method	Injection Molding		
Multi-Point Data	Isothermal Stress vs. Strain (ISO 11403-1)		
	Secant Modulus vs. Strain (ISO 11403-1)		
	Shear Modulus vs. Temperature (ISO 11403-1)		
Part Marking Code (ISO 11469)	>POM<		
Resin ID (ISO 1043)	POM		
Physical	Nominal Value	Unit	Test Method
Density	1.41	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	15	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (190°C/2.16 kg)	12.0	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	1.8	%	
Flow	1.9	%	
Water Absorption			ISO 62
23°C, 24 hr, 2.00 mm	1.0	%	
Equilibrium, 23°C, 2.00 mm, 50% RH	0.25	%	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ISO 2039-2
M-Scale	92		
R-Scale	120		
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	3100	MPa	ISO 527-2
Tensile Stress (Yield)	67.0	MPa	ISO 527-2
Tensile Strain (Yield)	15	%	ISO 527-2

Nominal Tensile Strain at Break	25	%	ISO 527-2
Flexural Modulus	2900	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	7.0	kJ/m ²	
23°C	8.0	kJ/m ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	290	kJ/m ²	
23°C	350	kJ/m ²	
Notched Izod Impact Strength			ISO 180/1A
-40°C	9.0	kJ/m ²	
23°C	9.0	kJ/m ²	
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed	158	°C	ISO 75-2/B
1.8 MPa, Unannealed	90.0	°C	ISO 75-2/A
Vicat Softening Temperature	160	°C	ISO 306/B50
Melting Temperature ¹	178	°C	ISO 11357-3
CLTE			ISO 11359-2
Flow	1.1E-4	cm/cm/°C	
Transverse	1.1E-4	cm/cm/°C	
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Relative Permittivity			IEC 60250
100 Hz	4.20		
1 MHz	4.10		
Comparative Tracking Index	600	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Burning Rate (1.00 mm)	28	mm/min	ISO 3795
Flammability Classification			IEC 60695-11-10, -20
0.800 mm	HB		
1.50 mm	HB		
NOTE			
1.	10°C/min		

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