

Delrin® 511DP NC010

ACETAL RESIN

DuPont Performance Polymers

Message:

Nucleated Medium Viscosity Acetal Homopolymer

General Information			
UL YellowCard	E41938-257619		
Additive	Mold Release		
Forms	Pellets		
Processing Method	Injection Molding		
Multi-Point Data	Isothermal Stress vs. Strain (ISO 11403-1)		
	Secant Modulus vs. Strain (ISO 11403-1)		
Part Marking Code (ISO 11469)	>POM<		
Resin ID (ISO 1043)	POM		
Physical	Nominal Value	Unit	Test Method
Density	1.42	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	14	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (190°C/2.16 kg)	13.0	cm³/10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	1.8	%	
Flow	1.9	%	
Water Absorption			
24 hr	0.30	%	ASTM D570
23°C, 24 hr, 2.00 mm	0.90	%	ISO 62
Equilibrium, 23°C, 2.00 mm, 50% RH	0.20	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	3400	MPa	ISO 527-2
Tensile Stress (Yield)	74.0	MPa	ISO 527-2
Tensile Strain (Yield)	12	%	ISO 527-2
Nominal Tensile Strain at Break	25	%	ISO 527-2
Flexural Modulus	3200	MPa	ISO 178
Flexural Stress (3.5% Strain)	87.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	6.5	kJ/m²	
23°C	7.0	kJ/m²	
Charpy Unnotched Impact Strength			ISO 179/1eU

-30°C	200	kJ/m ²	
23°C	220	kJ/m ²	
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed	163	°C	ISO 75-2/B
1.8 MPa, Unannealed	107	°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	1.0E-4	cm/cm/°C	
Transverse	1.1E-4	cm/cm/°C	
NOTE			

1. 10°C/min

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