

Delrin® 100 NC010

ACETAL RESIN

DuPont Performance Polymers

Message:

High Viscosity Acetal Homopolymer

General Information			
UL YellowCard	E41938-257671		
Additive	Mold Release		
Uses	Profiles		
	Sheet		
Agency Ratings	UL Unspecified Rating		
Forms	Pellets		
Processing Method	Extrusion		
	Injection Molding		
	Profile Extrusion		
	Sheet Extrusion		
Multi-Point Data	Isothermal Stress vs. Strain (ISO 11403-1)		
	Secant Modulus vs. Strain (ISO 11403-1)		
	Shear Modulus vs. Temperature (ISO 11403-1)		
	Shear Stress vs. Shear Rate (ISO 11403-1)		
	Specific Volume vs Temperature (ISO 11403-2)		
	Viscosity vs. Shear Rate (ISO 11403-2)		
Part Marking Code (ISO 11469)	>POM<		
Resin ID (ISO 1043)	POM		
Physical	Nominal Value	Unit	Test Method
Density	1.42	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	2.3	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (190°C/2.16 kg)	1.90	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	1.8	%	
Flow	2.2	%	
Water Absorption			ISO 62
23°C, 24 hr, 2.00 mm	0.90	%	
Equilibrium, 23°C, 2.00 mm, 50% RH	0.20	%	
Hardness	Nominal Value	Unit	Test Method

Rockwell Hardness			ISO 2039-2
M-Scale	90		
R-Scale	121		
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	3150	MPa	ISO 527-2
Tensile Stress (Yield)	72.0	MPa	ISO 527-2
Tensile Strain (Yield)	26	%	ISO 527-2
Nominal Tensile Strain at Break	45	%	ISO 527-2
Tensile Creep Modulus			ISO 899-1
1 hr	2900	MPa	
1000 hr	1600	MPa	
Flexural Modulus	2900	MPa	ISO 178
Flexural Stress (3.5% Strain)	79.0	MPa	ISO 178
Compressive Stress	110	MPa	ISO 604
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	14	kJ/m ²	
23°C	15	kJ/m ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	430	kJ/m ²	
23°C	No Break		
Notched Izod Impact Strength			ISO 180/1A
-40°C	13	kJ/m ²	
23°C	14	kJ/m ²	
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed	160	°C	ISO 75-2/B
1.8 MPa, Unannealed	100	°C	ISO 75-2/A
Vicat Softening Temperature			
--	175	°C	ISO 306/A50
--	160	°C	ISO 306/B50
Melting Temperature ¹	178	°C	ISO 11357-3
CLTE			ISO 11359-2
Flow	1.1E-4	cm/cm/°C	
Flow : -40 to 23°C	1.0E-4	cm/cm/°C	
Transverse	1.1E-4	cm/cm/°C	
Transverse : -40 to 23°C	1.0E-4	cm/cm/°C	
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	3.0E+13	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	ohms · cm	IEC 60093
Electric Strength	41	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250

100 Hz	3.90		
1 MHz	3.80		
Dissipation Factor			IEC 60250
100 Hz	1.0E-3		
1 MHz	5.5E-3		
Comparative Tracking Index	600	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Burning Rate (1.00 mm)	43	mm/min	ISO 3795
Flammability Classification			IEC 60695-11-10, -20
0.800 mm	HB		
1.50 mm	HB		
Fill Analysis	Nominal Value	Unit	
Melt Density	1.19	g/cm ³	
NOTE			
1.	10°C/min		

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