








DuPont Performance Polymers Delrin® 100 NC010 POM

Physical Properties	Metric	English	Comments
Density	1.42 g/cc	0.0513 lb/in ³	ISO 1183
Melt Density	1.19 g/cc @Temperature >=178 °C	0.0430 lb/in ³ @Temperature >=352 °F	
Water Absorption	0.90 % @Thickness 2.00 mm	0.90 % @Thickness 0.0787 in	Sim. to ISO 62
Moisture Absorption	0.200 % @Thickness 2.00 mm	0.200 % @Thickness 0.0787 in	Sim. to ISO 62
Linear Mold Shrinkage, Flow	0.030 cm/cm	0.030 in/in	ISO 294-4, 2577
Linear Mold Shrinkage, Transverse	0.022 cm/cm	0.022 in/in	ISO 294-4, 2577
Melt Flow	2.2 g/10 min @Load 2.16 kg, Temperature 190 °C	2.2 g/10 min @Load 4.76 lb, Temperature 374 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	90	90	ISO 2039-2
Hardness, Rockwell R	121	121	ISO 2039-2
Ball Indentation Hardness	173 MPa	25100 psi	H 358/30; ISO 2039-1
Tensile Strength, Yield	71.0 MPa	10300 psi	ISO 527-1/-2
Elongation at Break	45 %	45 %	ISO 527-1/-2
Elongation at Yield	26 %	26 %	ISO 527-1/-2
Tensile Modulus	2.90 GPa	421 ksi	ISO 527-1/-2
Flexural Strength	93.0 MPa	13500 psi	ISO 178
Flexural Yield Strength	77.0 MPa @Strain 3.50 %	11200 psi @Strain 3.50 %	ISO 178
Flexural Modulus	2.80 GPa	406 ksi	ISO 178
Compressive Strength	110 MPa	16000 psi	ISO 604
Poissons Ratio	0.37	0.37	ISO 527-1/-2
Izod Impact, Unnotched (ISO) 	13.0 kJ/m ² @Temperature -40.0 °C	6.19 ft-lb/in ² @Temperature -40.0 °F	ISO 180/1A
	14.0 kJ/m ² @Temperature 23.0 °C	6.66 ft-lb/in ² @Temperature 73.4 °F	ISO 180/1A
Charpy Impact Unnotched 	42.5 J/cm ² @Temperature -30.0 °C	202 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eU
	NB @Temperature 23.0 °C	NB @Temperature 73.4 °F	ISO 179/1eU
Charpy Impact, Notched 	1.30 J/cm ² @Temperature -30.0 °C	6.19 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eA
	1.50 J/cm ² @Temperature 23.0 °C	7.14 ft-lb/in ² @Temperature 73.4 °F	ISO 179/1eA
Tensile Creep Modulus, 1 hour	2900 MPa	421000 psi	ISO 899-1
Tensile Creep Modulus, 1000 hours	1600 MPa	232000 psi	ISO 899-1

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+15 ohm-cm	>= 1.00e+15 ohm-cm	IEC 62631-3-1
Surface Resistance	3.00e+13 ohm	3.00e+13 ohm	IEC 62631-3-2
Dielectric Constant 	3.8 @Frequency 1.00e+6 Hz	3.8 @Frequency 1.00e+6 Hz	IEC 62631-2-1
	3.9 @Frequency 100 Hz	3.9 @Frequency 100 Hz	IEC 62631-2-1
Dielectric Strength	41.0 kV/mm	1040 kV/in	IEC 60243-1
Dissipation Factor 	0.0010 @Frequency 100 Hz	0.0010 @Frequency 100 Hz	IEC 62631-2-1
	0.0055 @Frequency 1.00e+6 Hz	0.0055 @Frequency 1.00e+6 Hz	IEC 62631-2-1
Comparative Tracking Index	600 V	600 V	IEC 60112

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	110 µm/m-°C	61.1 µin/in-°F	ISO 11359-1/-2
	100 µm/m-°C @Temperature -40.0 - 23.0 °C	55.6 µin/in-°F @Temperature -40.0 - 73.4 °F	ISO 11359-1/-2

CTE, linear, Transverse to Flow	110 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	61.1 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	ISO 11359-1/-2
	100 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$ @Temperature -40.0 - 23.0 $^\circ\text{C}$	55.6 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$ @Temperature -40.0 - 73.4 $^\circ\text{F}$	ISO 11359-1/-2
Specific Heat Capacity	3.00 J/g $^\circ\text{C}$ @Temperature ≥ 178 $^\circ\text{C}$	0.717 BTU/lb $^\circ\text{F}$ @Temperature ≥ 352 $^\circ\text{F}$	Melt
Melting Point	178 $^\circ\text{C}$	352 $^\circ\text{F}$	10 $^\circ\text{C}/\text{min}$; ISO 11357-1/-3
Maximum Service Temperature, Air	110 $^\circ\text{C}$	230 $^\circ\text{F}$	Temperature index, tensile strength 20,000 h; IEC 60216-1
	125 $^\circ\text{C}$	257 $^\circ\text{F}$	Temperature index, tensile strength 5000 h; IEC 60216-1
Deflection Temperature at 0.46 MPa (66 psi)	160 $^\circ\text{C}$	320 $^\circ\text{F}$	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	95.0 $^\circ\text{C}$	203 $^\circ\text{F}$	ISO 75-1/-2
Vicat Softening Point	160 $^\circ\text{C}$	320 $^\circ\text{F}$	50 $^\circ\text{C}/\text{h}$, 50N; ISO 306
	175 $^\circ\text{C}$	347 $^\circ\text{F}$	50 $^\circ\text{C}/\text{h}$, 10N; ISO 306
Flammability, UL94 	HB @Thickness 0.800 mm	HB @Thickness 0.0315 in	IEC 60695-11-10
	HB @Thickness 1.50 mm	HB @Thickness 0.0591 in	IEC 60695-11-10
Flame Spread	40.0 mm/min @Thickness 1.00 mm	1.57 in/min @Thickness 0.0394 in	ISO 3795 (FMVSS 302)
Processing Properties			
	Metric	English	Comments
Melt Temperature	200 $^\circ\text{C}$	392 $^\circ\text{F}$	Extrusion Optimum
	195 - 205 $^\circ\text{C}$	383 - 401 $^\circ\text{F}$	Extrusion
	210 - 220 $^\circ\text{C}$	410 - 428 $^\circ\text{F}$	Injection
	215 $^\circ\text{C}$	419 $^\circ\text{F}$	Injection Optimum
Mold Temperature	80.0 - 100 $^\circ\text{C}$	176 - 212 $^\circ\text{F}$	Injection
	90.0 $^\circ\text{C}$	194 $^\circ\text{F}$	Injection Optimum
Drying Temperature	75.0 $^\circ\text{C}$	167 $^\circ\text{F}$	Extrusion
	80.0 $^\circ\text{C}$	176 $^\circ\text{F}$	Injection
	85.0 $^\circ\text{C}$	185 $^\circ\text{F}$	Extrusion
Dry Time	2.00 - 4.00 hour	2.00 - 4.00 hour	Dehumidified Dryer; Extrusion
	2.00 - 4.00 hour	2.00 - 4.00 hour	Dehumidified Dryer; Injection
Moisture Content	0.20 %	0.20 %	Extrusion
	0.20 %	0.20 %	Injection
Hold Pressure	90.0 - 110 MPa	13100 - 16000 psi	Injection
Annealing Temperature	160 $^\circ\text{C}$	320 $^\circ\text{F}$	Injection
Descriptive Properties			
Additives		Release agent	
Annealing time		30 min/mm	Injection - Optional
Delivery form		Pellets	
Drying Recommended		yes	Injection
Eff. thermal diffusivity		1.00E-07 m ² /s	
FMVSS Class		B	ISO 3795 (FMVSS 302)
Hold pressure time (s/mm)		8	Injection
Part Marking Code		POM	ISO 11469
Processing		Injection Molding	
		Other Extrusion	
		Profile Extrusion	
		Sheet Extrusion	
Regional Availability		Asia Pacific	
		Europe	
		Global	
		Near East/Africa	
		North America	
		South and Central America	
Resin Identification		POM	ISO 1043