DuPont Performance Polymers Delrin® 150 NC010 Acetal Homopolymer (Unverified Data**)

Category : Polymer , Thermoplastic , Acetal (POM)

Material Notes:

Delrin® 150 NC010 is a high viscosity acetal homopolymer for extrusion processes. It has excellent thermal stability, low die deposit, and enhanced crystallization for low porosity.Information provided by DuPont Performance Polymers

Order this product through the following link:
http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Delrin-150-NC010-Acetal-Homopolymer-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.42 g/cc	0.0513 lb/in³	ISO 1183
Water Absorption	0.39 % @Temperature 23.0 °C	0.39 % @Temperature 73.4 °F	Immersion 24h; ISO 62, Similar to
Linear Mold Shrinkage, Flow	0.018 cm/cm @Thickness 2.00 mm	0.018 in/in @Thickness 0.0787 in	ISO 294-4
Linear Mold Shrinkage, Transverse	0.020 cm/cm @Thickness 2.00 mm	0.020 in/in @Thickness 0.0787 in	ISO 294-4
Melt Flow	2.4 g/10 min @Load 2.16 kg, Temperature 190 °C	2.4 g/10 min @Load 4.76 lb, Temperature 374 °F	ISO 1133
Melt Index of Compound	1.9 g/10 min @Load 2.16 kg, Temperature 190 °C	1.9 g/10 min @Load 4.76 lb, Temperature 374 °F	cm3/10 min; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	72.0 MPa @Temperature 23.0 °C	10400 psi @Temperature 73.4 °F	ISO 527
Elongation at Break	40 % @Temperature 23.0 °C	40 % @Temperature 73.4 °F	nominal; ISO 527
Elongation at Yield	22 % @Temperature 23.0 °C	22 % @Temperature 73.4 °F	ISO 527
Tensile Modulus	3.10 GPa @Temperature 23.0 °C	450 ksi @Temperature 73.4 °F	ISO 527
	2.90 GPa	421 ksi	

Mechanical Properties	Metric	English	Comments
Flexural Modulus	@Temperature 23.0 °C	@Temperature 73.4 °F	ISO 178
Izod Impact, Notched (ISO)	10.0 kJ/m² @Temperature 23.0 °C	4.76 ft-lb/in² @Temperature 73.4 °F	ISO 180/1A
Charpy Impact, Notched	0.900 J/cm² @Temperature -30.0 °C	4.28 ft-lb/in² @Temperature -22.0 °F	ISO 179/1eA
	1.20 J/cm² @Temperature 23.0 °C	5.71 ft-lb/in² @Temperature 73.4 °F	ISO 179/1eA

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	500 µm/m-°C @Temperature -40.0 - 23.0 °C	278 µin/in-°F @Temperature -40.0 - 73.4 °F	ISO 11359-1/-2
	500 µm/m-°C @Temperature 23.0 - 55.0 °C	278 µin/in-°F @Temperature 73.4 - 131 °F	ISO 11359-1/-2
	500 µm/m-°C @Temperature 55.0 - 100 °C	278 µin/in-°F @Temperature 131 - 212 °F	ISO 11359-1/-2
CTE, linear, Transverse to Flow	90.0 µm/m-°C @Temperature -40.0 - 23.0 °C	50.0 µin/in-°F @Temperature -40.0 - 73.4 °F	ISO 11359-1/-2
	100 µm/m-°C @Temperature 23.0 - 55.0 °C	55.6 µin/in-°F @Temperature 73.4 - 131 °F	ISO 11359-1/-2
	150 µm/m-°C @Temperature 55.0 - 100 °C	83.3 µin/in-°F @Temperature 131 - 212 °F	ISO 11359-1/-2
Melting Point	178 °C	352 °F	10°C/min; ISO 11357-1/-3
Deflection Temperature at 0.46 MPa (66 psi)	165 °C	329 °F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	97.0 °C	207 °F	ISO 75-1/-2
UL RTI, Electrical	50.0 °C @Thickness 1.50 mm	122 °F @Thickness 0.0591 in	UL 746B
	50.0 °C	122 °F	UL 746B

Thermal Properties	Metric	English	Comments
	@Thickness 3.00 mm	@Thickness 0.118 in	
UL RTI, Mechanical with Impact	50.0 °C @Thickness 1.50 mm	122 °F @Thickness 0.0591 in	UL 746B
	50.0 °C @Thickness 3.00 mm	122 °F @Thickness 0.118 in	UL 746B
UL RTI, Mechanical without Impact	50.0 °C @Thickness 1.50 mm	122 °F @Thickness 0.0591 in	UL 746B
	50.0 °C @Thickness 3.00 mm	122 °F @Thickness 0.118 in	UL 746B
Flammability, UL94	HB @Thickness 1.50 mm	HB @Thickness 0.0591 in	IEC 60695-11-10
	HB @Thickness 3.00 mm	HB @Thickness 0.118 in	IEC 60695-11-10
	HB @Thickness 1.50 mm	HB @Thickness 0.0591 in	UL94
	HB @Thickness 3.00 mm	HB @Thickness 0.118 in	UL94

Electrical Properties	Metric	English	Comments
Dissipation Factor	0.0060 @Frequency 1.00e+6 Hz, Temperature 23.0 °C	0.0060 @Frequency 1.00e+6 Hz, Temperature 73.4 °F	IEC 60250

Processing Properties	Metric	English	Comments
Melt Temperature	200 °C	392 °F	Optimum; Extrusion
	195 - 205 °C	383 - 401 °F	Extrusion
	210 - 220 °C	410 - 428 °F	Injection Molding
	215 °C	419 °F	Optimum; Injection Molding
Mold Temperature	90.0 °C	194 °F	optimum; Injection Molding
	80.0 - 100 °C	176 - 212 °F	Injection Molding
Drying Temperature	80.0 °C	176 °F	Injection Molding

Processing Properties	Metric	English	Comments
Dry Time	2.00 - 4.00 hour	2.00 - 4.00 hour	Injection Molding
Moisture Content	<= 0.20 %	<= 0.20 %	Extrusion
	<= 0.20 %	<= 0.20 %	Injection Molding

Descriptive Properties	Value	Comments
Appearance	Natural Color	
Extrudable - Cast Film	Yes	
Extrudable - Sheet	Yes	
Extrudable - Tubing	Yes	
Extrudable - Wire and Cable	Yes	
Features	Creep Resistance, Good	
	Dimensional Stability, Good	
	Fatigue Resistant	
	Homopolymer	
	Impact Resistance, High	
	Molecular Wt., High	
	Stiffness, High	
	Strength, High	
	Toughness, Good	
	Viscosity, High	
Forms	Pellets	
Generic	Acetal (POM) Homopolymer	
Material Status	Current	
Part Marking Code	>POM<	ISO 11469
Polymer Family	POM	
Polymer Type	POM Homopolymer	
Processing Method	Extrusion	
Product Category	Extrusion Resins	

Descriptive Properties	Value	Comments
	Unreinforced Resins	
Region Available - Global	Yes	
Resin Identification	POM	ISO 1043
RoHS Compliance	Contact Manufacturer	
Ultrasonic Weldable	Yes	
Uses	Parts, Engineering	
	Sheet	
	Tubing	

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