

DuPont Performance Polymers Delrin® FG100P NC010 Acetal Homopolymer (Unverified Data**)

Category : Polymer , Thermoplastic , Acetal (POM)

Material Notes:

Delrin® FG100P is a high viscosity acetal homopolymer, with improved thermal stability for use in easy to fill molds. It has been developed for consideration into applications such as parts for the food industry. Information provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Delrin-FG100P-NC010-Acetal-Homopolymer-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.42 g/cc	0.0513 lb/in ³	ISO 1183
Water Absorption	0.30 %	0.30 %	Equilibrium 50%RH; ISO 62, Similar to
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	1.4 %	1.4 %	Saturation, immersed; ISO 62, Similar to
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Linear Mold Shrinkage, Flow	0.022 cm/cm	0.022 in/in	ISO 294-4
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Linear Mold Shrinkage, Transverse	0.020 cm/cm	0.020 in/in	ISO 294-4
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Melt Flow	2.5 g/10 min	2.5 g/10 min	ISO 1133
	@Load 2.16 kg, Temperature 190 °C	@Load 4.76 lb, Temperature 374 °F	
Melt Index of Compound	1.9 g/10 min	1.9 g/10 min	cm ³ /10 min; ISO 1133
	@Load 2.16 kg, Temperature 190 °C	@Load 4.76 lb, Temperature 374 °F	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	70.0 MPa	10200 psi	ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Elongation at Break	45 %	45 %	nominal; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Elongation at Yield	25 %	25 %	ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	2.90 GPa	421 ksi	

Mechanical Properties	Metric	English	ISO 527 Comments
Flexural Modulus	2.60 GPa	377 ksi	ISO 178
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact Unnotched	35.0 J/cm ²	167 ft-lb/in ²	ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	NB	NB	ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	1.10 J/cm ²	5.23 ft-lb/in ²	ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Tensile Creep Modulus, 1 hour	1.40 J/cm ²	6.66 ft-lb/in ²	ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Creep Modulus, 1000 hours	2700 MPa	392000 psi	ISO 899
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Creep Modulus, 1000 hours	1500 MPa	218000 psi	ISO 899
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	500 µm/m-°C	278 µin/in-°F	ISO 11359-1/-2
	@Temperature -40.0 - 23.0 °C	@Temperature -40.0 - 73.4 °F	
CTE, linear, Parallel to Flow	500 µm/m-°C	278 µin/in-°F	ISO 11359-1/-2
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	
CTE, linear, Parallel to Flow	500 µm/m-°C	278 µin/in-°F	ISO 11359-1/-2
	@Temperature 55.0 - 100 °C	@Temperature 131 - 212 °F	
CTE, linear, Transverse to Flow	100 µm/m-°C	55.6 µin/in-°F	ISO 11359-1/-2
	@Temperature -40.0 - 23.0 °C	@Temperature -40.0 - 73.4 °F	
CTE, linear, Transverse to Flow	110 µm/m-°C	61.1 µin/in-°F	ISO 11359-1/-2
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	
CTE, linear, Transverse to Flow	150 µm/m-°C	83.3 µin/in-°F	ISO 11359-1/-2
	@Temperature 55.0 -	@Temperature 131 -	

Thermal Properties	100 °C Metric	212 °F English	Comments
Melting Point	178 °C	352 °F	10°C/min; ISO 11357-1/-3
Deflection Temperature at 0.46 MPa (66 psi)	160 °C	320 °F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	93.0 °C	199 °F	ISO 75-1/-2

Processing Properties	Metric	English	Comments
Melt Temperature	215 °C	419 °F	Optimum; Injection Molding
	210 - 220 °C	410 - 428 °F	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
Dry Time	2.00 - 4.00 hour	2.00 - 4.00 hour	Injection Molding
Moisture Content	<= 0.20 %	<= 0.20 %	Injection Molding

Descriptive Properties	Value	Comments
Appearance	Natural Color	
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	Preliminary Data	

Descriptive Properties <small>Part Marking Code</small>	Value <small>SPUMC</small>	Comments <small>ISO 11439</small>
Processing Method	Injection Molding	
Product Category	Food Contact Resins	
	Unreinforced Resins	
Region Available - Global	Yes	
Resin Identification	POM	ISO 1043
RoHS Compliance	Contact Manufacturer	
Uses	Conveyors	
	Fasteners	
	Food Applications, Non-specific	
	Gears	
	Housings	
	Parts, Engineering	
	Sheet	
	Tubing	

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