

DuPont Performance Polymers Delrin® FG311DP NC010 Acetal Homopolymer (Unverified Data**)

Category : Polymer , Thermoplastic , Acetal (POM)

Material Notes:

Delrin® FG311DP is a medium-high viscosity acetal homopolymer, with improved thermal stability and modifications for more precise molding. 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-FG311DP-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	0.20 %	0.20 %	Equilibrium 50%RH; ISO 62, Similar to
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	0.40 %	0.40 %	Immersion 24h; ISO 62, Similar to
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	0.90 %	0.90 %	Saturation, immersed; ISO 62, Similar to
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Linear Mold Shrinkage, Flow	0.019 cm/cm	0.019 in/in	ISO 294-4
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Linear Mold Shrinkage, Transverse	0.018 cm/cm	0.018 in/in	ISO 294-4
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Melt Flow	7.0 g/10 min	7.0 g/10 min	ISO 1133
	@Load 2.16 kg, Temperature 190 °C	@Load 4.76 lb, Temperature 374 °F	
Melt Index of Compound	6.0 g/10 min	6.0 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	73.0 MPa	10600 psi	ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Elongation at Break	35 %	35 %	nominal; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Mechanical Properties	Metric	English	Comments
Elongation at Yield	@Temperature 23.0 °C	@Temperature 73.4 °F	ISO 527
	3.30 GPa	479 ksi	ISO 527
Tensile Modulus	@Temperature 23.0 °C	@Temperature 73.4 °F	ISO 527
	3.10 GPa	450 ksi	ISO 178
Flexural Modulus	@Temperature 23.0 °C	@Temperature 73.4 °F	ISO 178
	25.0 J/cm ²	119 ft-lb/in ²	ISO 179/1eU
Charpy Impact Unnotched	@Temperature -30.0 °C	@Temperature -22.0 °F	ISO 179/1eU
	30.0 J/cm ²	143 ft-lb/in ²	ISO 179/1eU
Charpy Impact, Notched	@Temperature 23.0 °C	@Temperature 73.4 °F	ISO 179/1eA
	0.800 J/cm ²	3.81 ft-lb/in ²	ISO 179/1eA
	@Temperature -40.0 °C	@Temperature -40.0 °F	ISO 179/1eA
	0.900 J/cm ²	4.28 ft-lb/in ²	ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	ISO 179/1eA
	1.00 J/cm ²	4.76 ft-lb/in ²	ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	ISO 179/1eA

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	ISO 11359-1/-2
	500 µm/m-°C	278 µin/in-°F	ISO 11359-1/-2
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	ISO 11359-1/-2
	500 µm/m-°C	278 µin/in-°F	ISO 11359-1/-2
	@Temperature 55.0 - 100 °C	@Temperature 131 - 212 °F	ISO 11359-1/-2
CTE, linear, Transverse to Flow	95.0 µm/m-°C	52.8 µin/in-°F	ISO 11359-1/-2
	@Temperature -40.0 - 23.0 °C	@Temperature -40.0 - 73.4 °F	ISO 11359-1/-2
	110 µm/m-°C	61.1 µin/in-°F	ISO 11359-1/-2
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	ISO 11359-1/-2
	140 µm/m-°C	77.8 µin/in-°F	

Thermal Properties	Metric	English	ISO 11359-1/-2 Comments
	@ Temperature 55.0 - 100 °C	@ Temperature 131 - 212 °F	
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)	103 °C	217 °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, Good	
	Stiffness, High	
	Strength, High	
	Viscosity, Medium-high	
Forms	Pellets	
Generic	Acetal (POM) Homopolymer	
Material Status	Preliminary Data	
Part Marking Code	>POM<	ISO 11469

Descriptive Properties	Value on Molding	Comments
Product Category	Food Contact Resins	
	Unreinforced Resins	
Region Available - Global	Yes	
Resin Identification	POM	ISO 1043
RoHS Compliance	Contact Manufacturer	
Uses	Automotive Interior Parts	
	Conveyors	
	Fasteners	
	Food Applications, Non-specific	
	Gears	
	Parts, Engineering	
	Tubing	

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