

DuPont Performance Polymers Delrin® 100TL NC010 Acetal Homopolymer (Unverified Data**)

Category : Polymer , Thermoplastic , Acetal (POM) , Acetal Homopolymer, PTFE-Filled

Material Notes:

Delrin® 100TL NC010 is a high viscosity acetal homopolymer with 1.5% Teflon® PTFE Micropowder. Information provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Delrin-100TL-NC010-Acetal-Homopolymer-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.43 g/cc	0.0517 lb/in ³	ISO 1183
Linear Mold Shrinkage, Flow	0.018 cm/cm	0.018 in/in	ISO 294-4
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Linear Mold Shrinkage, Transverse	0.019 cm/cm	0.019 in/in	ISO 294-4
	@Thickness 4.00 mm	@Thickness 0.157 in	
Melt Flow	0.017 cm/cm	0.017 in/in	ISO 1133
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Melt Flow	2.2 g/10 min	2.2 g/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	71.0 MPa	10300 psi	ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Elongation at Break	33 %	33 %	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	
Tensile Modulus	3.00 GPa	435 ksi	ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Flexural Modulus	2.80 GPa	406 ksi	ISO 178
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	15.0 J/cm ²	71.4 ft-lb/in ²	

Charpy Impact Unnotched Mechanical Properties	Metric @ Temperature 23.0 °C	English @ Temperature 73.4 °F	ISO 179/1eJ Comments
Charpy Impact, Notched	0.800 J/cm ²	3.81 ft-lb/in ²	ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	0.900 J/cm ²	4.28 ft-lb/in ²	ISO 179/1eA
	@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	
	500 µm/m-°C	278 µin/in-°F	
	@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	
CTE, linear, Transverse to Flow	100 µm/m-°C	55.6 µin/in-°F	
	@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	
160 µm/m-°C	88.9 µin/in-°F	ISO 11359-1/-2	
	@Temperature 55.0 - 100 °C	@Temperature 131 - 212 °F	ISO 11359-1/-2
	Melting Point	178 °C	352 °F
Deflection Temperature at 0.46 MPa (66 psi)	158 °C	316 °F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	95.0 °C	203 °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

Processing Properties	Metric	English	Comments
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
Additive	Lubricant, PTFE	
Appearance	Natural Color	
Features	Creep Resistance, Good	
	Dimensional Stability, Good	
	Friction, Low	
	Homopolymer	
	Molecular Wt., High	
	Stiffness, High	
	Strength, High	
	Viscosity, High	
	Wear Resistance, Good	
Forms	Pellets	
Generic	Acetal (POM) Homopolymer	
Material Status	Preliminary Data	
Part Marking Code	>POM-SD<	ISO 11469
Polymer Family	POM	
Polymer Type	POM Homopolymer	
Processing Method	Extrusion	
	Injection Molding	
Product Category	Extrusion Resins	
	Low Wear and Friction Resins	
	Unreinforced Resins	
Region Available - Global	Yes	

Descriptive Properties	Value	Comments
RoHS Compliance	Contact Manufacturer	
Uses	Conveyors	
	Gears	
	Parts, Engineering	
	Tubing	

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