

## DuPont Performance Polymers Delrin® FG500TL NC010 Acetal Homopolymer (Unverified Data\*\*)

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

### Material Notes:

Delrin® FG500TL medium viscosity acetal homopolymer resin containing 1.5% Teflon® PTFE Micropowder. 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-FG500TL-NC010-Acetal-Homopolymer-nbspUnverified-Data.php](http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Delrin-FG500TL-NC010-Acetal-Homopolymer-nbspUnverified-Data.php)

Physical Properties	Metric	English	Comments
Density	1.43 g/cc	0.0517 lb/in <sup>3</sup>	ISO 1183
Water Absorption	0.17 %	0.17 %	Equilibrium 50%RH; ISO 62, Similar to
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	0.33 %	0.33 %	Immersion 24h; ISO 62, Similar to
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Linear Mold Shrinkage, Flow	0.90 %	0.90 %	Saturation, immersed; ISO 62, Similar to
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	0.018 cm/cm	0.018 in/in	ISO 294-4
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Linear Mold Shrinkage, Transverse	0.017 cm/cm	0.017 in/in	ISO 294-4
	@Thickness 2.00 mm	@Thickness 0.0787 in	
	14 g/10 min	14 g/10 min	ISO 1133
	@Load 2.16 kg, Temperature 190 °C	@Load 4.76 lb, Temperature 374 °F	
Melt Index of Compound	12 g/10 min	12 g/10 min	cm <sup>3</sup> /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	20 %	20 %	nominal; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	13 %	13 %	

<b>Elongation at Yield Mechanical Properties</b>	<b>Metric @ Temperature 23.0 °C</b>	<b>English @ Temperature 73.4 °F</b>	<b>ISO 527 Comments</b>
<b>Tensile Modulus</b>	<b>3.30 GPa</b> @Temperature 23.0 °C	<b>479 ksi</b> @Temperature 73.4 °F	ISO 527
<b>Flexural Modulus</b>	<b>3.10 GPa</b> @Temperature 23.0 °C	<b>450 ksi</b> @Temperature 73.4 °F	ISO 178
<b>Charpy Impact Unnotched</b>	<b>16.0 J/cm<sup>2</sup></b> @Temperature -30.0 °C	<b>76.1 ft-lb/in<sup>2</sup></b> @Temperature -22.0 °F	ISO 179/1eU
	<b>17.0 J/cm<sup>2</sup></b> @Temperature 23.0 °C	<b>80.9 ft-lb/in<sup>2</sup></b> @Temperature 73.4 °F	ISO 179/1eU
<b>Charpy Impact, Notched</b>	<b>0.400 J/cm<sup>2</sup></b> @Temperature -30.0 °C	<b>1.90 ft-lb/in<sup>2</sup></b> @Temperature -22.0 °F	ISO 179/1eA
	<b>0.500 J/cm<sup>2</sup></b> @Temperature 23.0 °C	<b>2.38 ft-lb/in<sup>2</sup></b> @Temperature 73.4 °F	ISO 179/1eA

<b>Thermal Properties</b>	<b>Metric</b>	<b>English</b>	<b>Comments</b>
<b>CTE, linear, Parallel to Flow</b>	<b>500 µm/m-°C</b> @Temperature -40.0 - 23.0 °C	<b>278 µin/in-°F</b> @Temperature -40.0 - 73.4 °F	ISO 11359-1/-2
	<b>500 µm/m-°C</b> @Temperature 23.0 - 55.0 °C	<b>278 µin/in-°F</b> @Temperature 73.4 - 131 °F	ISO 11359-1/-2
	<b>500 µm/m-°C</b> @Temperature 55.0 - 100 °C	<b>278 µin/in-°F</b> @Temperature 131 - 212 °F	ISO 11359-1/-2
<b>CTE, linear, Transverse to Flow</b>	<b>90.0 µm/m-°C</b> @Temperature -40.0 - 23.0 °C	<b>50.0 µin/in-°F</b> @Temperature -40.0 - 73.4 °F	ISO 11359-1/-2
	<b>100 µm/m-°C</b> @Temperature 23.0 - 55.0 °C	<b>55.6 µin/in-°F</b> @Temperature 73.4 - 131 °F	ISO 11359-1/-2
	<b>150 µm/m-°C</b> @Temperature 55.0 - 100 °C	<b>83.3 µin/in-°F</b> @Temperature 131 - 212 °F	ISO 11359-1/-2
<b>Melting Point</b>	<b>178 °C</b>	<b>352 °F</b>	10°C/min; ISO 11357-1/-3

Thermal Properties	Metric	English	Comments
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	
	Fatigue Resistant	
	Friction, Low	
	Homopolymer	
	Stiffness, High	
	Strength, High	
	Viscosity, Medium	
	Wear Resistance, Good	
Forms	Pellets	
Generic	Acetal (POM) Homopolymer	
Material Status	Preliminary Data	
Part Marking Code	>POM-SD<	ISO 11469
Processing Method	Injection Molding	
Product Category	Food Contact Resins	
	Low Wear and Friction Resins	

Descriptive Properties	Value	Comments
	Unreinforced Resins	
Region Available - Global	Yes	
Resin Identification	POM-SD	ISO 1043
RoHS Compliance	Contact Manufacturer	
Uses	Food Applications, Non-specific	
	Parts, Engineering	

## Contact Songhan Plastic Technology Co.,Ltd.

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