

DuPont Performance Polymers Delrin® 510GR NC000 Acetal (POM) (Unverified Data**)

Category : Polymer , Thermoplastic , Acetal (POM) , Acetal Homopolymer, Glass Fiber Reinforced

Material Notes:

10% Glass Reinforced Medium Viscosity Acetal Homopolymer Delrin 510GR is a 10% glass reinforced acetal homopolymer for injection molding. It has high strength stiffness and high deflection temperature and excellent creep resistance. Information provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Delrin-510GR-NC000-Acetal-POM-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.49 g/cc	0.0538 lb/in ³	ISO 1183
Water Absorption	1.1 % @Thickness 2.00 mm	1.1 % @Thickness 0.0787 in	Sim. to ISO 62
Moisture Absorption	0.160 % @Thickness 2.00 mm	0.160 % @Thickness 0.0787 in	Sim. to ISO 62
Linear Mold Shrinkage, Flow	0.010 cm/cm	0.010 in/in	ISO 294-4 2577
Linear Mold Shrinkage, Transverse	0.014 cm/cm	0.014 in/in	ISO 294-4 2577
Melt Flow	12 g/10 min @Load 2.16 kg, Temperature 190 °C	12 g/10 min @Load 4.76 lb, Temperature 374 °F	cm ³ /10min; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	95.0 MPa	13800 psi	ISO 527-1/-2
Tensile Stress	7.325 MPa @Strain 0.100 %, Temperature 23.0 °C	1062 psi @Strain 0.100 %, Temperature 73.4 °F	ISO 11403-1 -2
	38.14 MPa @Strain 0.700 %, Temperature 23.0 °C	5531 psi @Strain 0.700 %, Temperature 73.4 °F	ISO 11403-1 -2
	58.68 MPa @Strain 1.20 %, Temperature 23.0 °C	8511 psi @Strain 1.20 %, Temperature 73.4 °F	ISO 11403-1 -2
	74.43 MPa @Strain 1.70 %	10800 psi @Strain 1.70 %	ISO 11403-1 -2

Mechanical Properties	Temperature 23.0 °C Metric	Temperature 73.4 °F English	Comments
	108.0 MPa	15660 psi	
	@Strain 3.40 %, Temperature 23.0 °C	@Strain 3.40 %, Temperature 73.4 °F	ISO 11403-1 -2
Elongation at Break	4.3 %	4.3 %	ISO 527-1/-2
Tensile Modulus	5.50 GPa	798 ksi	ISO 527-1/-2
Flexural Modulus	4.80 GPa	696 ksi	ISO 178
	3.56 GPa	516 ksi	
Secant Modulus	@Strain 2.80 %, Temperature 23.0 °C	@Strain 2.80 %, Temperature 73.4 °F	ISO 11403-1 -2
	4.04 GPa	586 ksi	
	@Strain 2.10 %, Temperature 23.0 °C	@Strain 2.10 %, Temperature 73.4 °F	ISO 11403-1 -2
	4.67 GPa	678 ksi	
	@Strain 1.40 %, Temperature 23.0 °C	@Strain 1.40 %, Temperature 73.4 °F	ISO 11403-1 -2
	5.45 GPa	790 ksi	
	@Strain 0.700 %, Temperature 23.0 °C	@Strain 0.700 %, Temperature 73.4 °F	ISO 11403-1 -2
	7.325 GPa	1062 ksi	
	@Strain 0.100 %, Temperature 23.0 °C	@Strain 0.100 %, Temperature 73.4 °F	ISO 11403-1 -2
Izod Impact, Notched (ISO)	5.00 kJ/m ²	2.38 ft-lb/in ²	ISO 180/1A
Charpy Impact Unnotched	5.00 J/cm ²	23.8 ft-lb/in ²	ISO 179/1eU
	5.00 J/cm ²	23.8 ft-lb/in ²	
	@Temperature -30.0 °C	@Temperature -22.0 °F	ISO 179/1eU
Charpy Impact, Notched	0.500 J/cm ²	2.38 ft-lb/in ²	ISO 179/1eA
	0.500 J/cm ²	2.38 ft-lb/in ²	
	@Temperature -30.0 °C	@Temperature -22.0 °F	ISO 179/1eA
Tensile Creep Modulus, 1 hour	4800 MPa	696000 psi	
	@Time 3600 sec	@Time 1.00 hour	ISO 899-1
Tensile Creep Modulus, 1000 hours	3500 MPa	508000 psi	
	@Time 3.60e+6 sec	@Time 1000 hour	ISO 899-1

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	70.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	38.9 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	ISO 11359-1/-2
CTE, linear, Transverse to Flow	100 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	55.6 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	ISO 11359-1/-2
Melting Point	178 $^\circ\text{C}$	352 $^\circ\text{F}$	10 $^\circ\text{C}/\text{min}$; ISO 11357-1/-3
Deflection Temperature at 0.46 MPa (66 psi)	174 $^\circ\text{C}$	345 $^\circ\text{F}$	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	164 $^\circ\text{C}$	327 $^\circ\text{F}$	ISO 75-1/-2
Vicat Softening Point	160 $^\circ\text{C}$	320 $^\circ\text{F}$	50 $^\circ\text{C}/\text{h}$ 50N; ISO 306
Flammability, UL94	HB @Thickness 0.800 mm	HB @Thickness 0.0315 in	IEC 60695-11-10

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+13 ohm-cm	1.00e+13 ohm-cm	IEC 60093
Dielectric Constant	3.7 @Frequency 100 Hz	3.7 @Frequency 100 Hz	IEC 60250
	3.9 @Frequency 1.00e+6 Hz	3.9 @Frequency 1.00e+6 Hz	
Comparative Tracking Index	600 V	600 V	IEC 60112

Descriptive Properties	Value	Comments
Additives	Release agent	
Delivery Form	Pellets	
Part Marking Code	>POM-GF10<	ISO 11469
Processing	Injection Moulding	
Regional Availability	Asia Pacific	
	Europe	
	Global	
	Near East/Africa	
	North America	
	South and Central America	

Descriptive Properties	Value	Comments
Resin Identification	POM-GF-10	ISO 1043
UL recognition	UL	

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