

DuPont Performance Polymers Delrin® 500PE NC010A Acetal Homopolymer

Category : Polymer , Thermoplastic , Acetal (POM)

Material Notes:

Delrin® 500PE NC010A is a medium viscosity acetal homopolymer, an enhanced version of Delrin® 500P with extremely low VOC emissions. It has improved processing thermal stability, and good mechanical properties. Information provided by DuPont

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Delrin-500PE-NC010A-Acetal-Homopolymer.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	
	0.50 %	0.50 %	
	@Temperature 23.0 °C	@Temperature 73.4 °F	Immersion 24h; ISO 62, Similar to
	1.4 %	1.4 %	Saturation, immersed; ISO 62, Similar to
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Linear Mold Shrinkage	0.019 cm/cm	0.019 in/in	Normal; ISO 294-4
	@Thickness 2.00 mm	@Thickness 0.0787 in	
	0.020 cm/cm	0.020 in/in	Parallel; ISO 294-4
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Melt Flow	15 g/10 min	15 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	70.0 MPa	10200 psi	ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Elongation at Break	25 %	25 %	ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Elongation at Yield	15 %	15 %	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	

Mechanical Properties	Metric	English	Comments
	2.90 GPa @Temperature 23.0 °C	421 ksi @Temperature 73.4 °F	
Charpy Impact Unnotched	23.0 J/cm ²	109 ft-lb/in ²	ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	28.0 J/cm ²	133 ft-lb/in ²	ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	0.700 J/cm ²	3.33 ft-lb/in ²	ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Tensile Creep Modulus, 1 hour	0.900 J/cm ²	4.28 ft-lb/in ²	ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Creep Modulus, 1000 hours	2800 MPa	406000 psi	ISO 899
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Creep Modulus, 1000 hours	1600 MPa	232000 psi	ISO 899
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel 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, Parallel 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, Parallel to Flow	150 µm/m-°C	83.3 µin/in-°F	ISO 11359-1/-2
	@Temperature 55.0 - 100 °C	@Temperature 131 - 212 °F	
CTE, linear, Transverse to Flow	90.0 µm/m-°C	50.0 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	160 µm/m-°C	88.9 µin/in-°F	ISO 11359-1/-2
	@Temperature 55.0 - 100 °C	@Temperature 131 - 212 °F	
Melting Point	178 °C	352 °F	10°C/min; ISO 11357-1/-3

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	158 °C	318 °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	205 °C	401 °F	Optimum; Injection Molding
	200 - 210 °C	392 - 410 °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	
	Homopolymer	
	Impact Resistance, Good	
	Stiffness, High	
	Strength, High	
	Viscosity, Medium	
	VOC, Low	
Forms	Pellets	
Generic	Acetal (POM) Homopolymer	
Material Status	Current	
Part Marking Code	>POM<	ISO 11469
Polymer Family	POM	
Polymer Type	POM Homopolymer	

Processing Method Descriptive Properties	Injection Molding Value	Comments
Product Category	Low Emissions Resins	
	Unreinforced Resins	
Region Available - Global	Yes	
Resin Identification	POM	ISO 1043
RoHS Compliance	Contact Manufacturer	
Uses	Automotive Interior Parts	
	Gears	
	Parts, Engineering	

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China