

DuPont Performance Polymers Delrin® 500P NC010 Acetal (POM) (Unverified Data**)

Category : Polymer , Thermoplastic , Acetal (POM) , Acetal Homopolymer, Unreinforced

Material Notes:

Medium Viscosity Acetal Homopolymer with Improved Processing Delrin 500P is a medium viscosity acetal homopolymer for injection molding. It has improved processing thermal stability good mechanical properties and low volatile emissions. Information provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Delrin-500P-NC010-Acetal-POM-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.42 g/cc	0.0513 lb/in ³	ISO 1183
Water Absorption	1.4 % @Thickness 2.00 mm	1.4 % @Thickness 0.0787 in	Sim. to ISO 62
Moisture Absorption	0.300 % @Thickness 2.00 mm	0.300 % @Thickness 0.0787 in	Sim. to ISO 62
Viscosity	92857 cP @Shear Rate 5000 1/s, Temperature 230 °C	92857 cP @Shear Rate 5000 1/s, Temperature 446 °F	ISO 11403-1 -2
	100600 cP @Shear Rate 5000 1/s, Temperature 215 °C	100600 cP @Shear Rate 5000 1/s, Temperature 419 °F	ISO 11403-1 -2
	107100 cP @Shear Rate 5000 1/s, Temperature 200 °C	107100 cP @Shear Rate 5000 1/s, Temperature 392 °F	ISO 11403-1 -2
	260530 cP @Shear Rate 500 1/s, Temperature 230 °C	260530 cP @Shear Rate 500 1/s, Temperature 446 °F	ISO 11403-1 -2
	298700 cP @Shear Rate 500 1/s, Temperature 215 °C	298700 cP @Shear Rate 500 1/s, Temperature 419 °F	ISO 11403-1 -2
	348640 cP @Shear Rate 500 1/s, Temperature 200 °C	348640 cP @Shear Rate 500 1/s, Temperature 392 °F	ISO 11403-1 -2
Linear Mold Shrinkage, Flow	0.020 cm/cm	0.020 in/in	ISO 294-4 2577
Linear Mold Shrinkage, Transverse	0.019 cm/cm	0.019 in/in	ISO 294-4 2577

Physical Properties	Metric	English	Comments
Melt Flow	@Load 2.16 kg, Temperature 190 °C	@Load 4.76 lb, Temperature 374 °F	cm ³ /10min; ISO 1133
	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
Hardness, Rockwell M	92	92	ISO 2039-2
Hardness, Rockwell R	120	120	ISO 2039-2
Tensile Stress	5.40 MPa	783 psi	ISO 11403-1 -2
	@Strain 0.400 %, Temperature 90.0 °C	@Strain 0.400 %, Temperature 194 °F	
	19.4 MPa	2810 psi	ISO 11403-1 -2
	@Strain 0.600 %, Temperature 23.0 °C	@Strain 0.600 %, Temperature 73.4 °F	
	19.8 MPa	2870 psi	ISO 11403-1 -2
	@Strain 1.90 %, Temperature 90.0 °C	@Strain 1.90 %, Temperature 194 °F	
	21.7 MPa	3150 psi	ISO 11403-1 -2
	@Strain 0.700 %, Temperature 0.000 °C	@Strain 0.700 %, Temperature 32.0 °F	
	27.7 MPa	4020 psi	ISO 11403-1 -2
	@Strain 3.30 %, Temperature 90.0 °C	@Strain 3.30 %, Temperature 194 °F	
	32.0 MPa	4640 psi	ISO 11403-1 -2
	@Strain 4.70 %, Temperature 90.0 °C	@Strain 4.70 %, Temperature 194 °F	
	36.5 MPa	5290 psi	ISO 11403-1 -2
	@Strain 1.00 %, Temperature -40.0 °C	@Strain 1.00 %, Temperature -40.0 °F	
	52.2 MPa	7570 psi	ISO 11403-1 -2
	@Strain 2.60 %, Temperature 23.0 °C	@Strain 2.60 %, Temperature 73.4 °F	
	63.5 MPa	9210 psi	ISO 11403-1 -2
	@Strain 4.70 %, Temperature 23.0 °C	@Strain 4.70 %, Temperature 73.4 °F	

Mechanical Properties	Metric	English	Comments
	@Strain 2.90 %, Temperature 0.000 °C	@Strain 2.90 %, Temperature 32.0 °F	ISO 11403-1 -2
	67.3 MPa	9760 psi	
	@Strain 7.00 %, Temperature 23.0 °C	@Strain 7.00 %, Temperature 73.4 °F	ISO 11403-1 -2
	77.1 MPa	11200 psi	
	@Strain 5.00 %, Temperature 0.000 °C	@Strain 5.00 %, Temperature 32.0 °F	ISO 11403-1 -2
	81.8 MPa	11900 psi	
	@Strain 8.00 %, Temperature 0.000 °C	@Strain 8.00 %, Temperature 32.0 °F	ISO 11403-1 -2
	87.5 MPa	12700 psi	
	@Strain 4.20 %, Temperature -40.0 °C	@Strain 4.20 %, Temperature -40.0 °F	ISO 11403-1 -2
	94.4 MPa	13700 psi	
	@Strain 7.00 %, Temperature -40.0 °C	@Strain 7.00 %, Temperature -40.0 °F	ISO 11403-1 -2
	95.9 MPa	13900 psi	
	@Strain 10.0 %, Temperature -40.0 °C	@Strain 10.0 %, Temperature -40.0 °F	ISO 11403-1 -2
Tensile Strength, Yield	70.5 MPa	10200 psi	ISO 527-1/-2
Elongation at Break	30 %	30 %	Nominal; ISO 527-1/-2
Elongation at Yield	17 %	17 %	ISO 527-1/-2
Tensile Modulus	3.10 GPa	450 ksi	ISO 527-1/-2
Flexural Strength	80.0 MPa	11600 psi	
	@Strain 3.50 %	@Strain 3.50 %	ISO 178
Flexural Modulus	2.95 GPa	428 ksi	ISO 178
Shear Modulus	0.275 GPa	39.9 ksi	
	@Temperature 120 °C	@Temperature 248 °F	Dynamic; ISO 11403-1 -2
	0.5547 GPa	80.45 ksi	
	@Temperature 70.0 °C	@Temperature 158 °F	Dynamic; ISO 11403-1 -2
	0.9459 GPa	137.2 ksi	
	@Temperature 20.0 °C	@Temperature 68.0 °F	Dynamic; ISO 11403-1 -2

Mechanical Properties	1.1421 GPa Metric	165.65 ksi English	Comments
	@Temperature -20.0 °C	@Temperature -4.00 °F	Dynamic; ISO 11403-1 -2
	1.3715 GPa	198.92 ksi	Dynamic; ISO 11403-1 -2
	@Temperature -50.0 °C	@Temperature -58.0 °F	
Secant Modulus	0.538 GPa	78.1 ksi	ISO 11403-1 -2
	@Strain 12.8 %, Temperature 23.0 °C	@Strain 12.8 %, Temperature 73.4 °F	
	0.603 GPa	87.4 ksi	ISO 11403-1 -2
	@Strain 13.8 %, Temperature 0.000 °C	@Strain 13.8 %, Temperature 32.0 °F	
	0.760 GPa	110 ksi	ISO 11403-1 -2
	@Strain 9.00 %, Temperature 23.0 °C	@Strain 9.00 %, Temperature 73.4 °F	
	0.8025 GPa	116.4 ksi	ISO 11403-1 -2
	@Strain 12.0 %, Temperature -40.0 °C	@Strain 12.0 %, Temperature -40.0 °F	
	0.828 GPa	120 ksi	ISO 11403-1 -2
	@Strain 10.0 %, Temperature 0.000 °C	@Strain 10.0 %, Temperature 32.0 °F	
	1.19 GPa	172 ksi	ISO 11403-1 -2
	@Strain 8.00 %, Temperature -40.0 °C	@Strain 8.00 %, Temperature -40.0 °F	
	1.284 GPa	186.2 ksi	ISO 11403-1 -2
	@Strain 5.00 %, Temperature 23.0 °C	@Strain 5.00 %, Temperature 73.4 °F	
	1.32 GPa	192 ksi	ISO 11403-1 -2
	@Strain 6.00 %, Temperature 0.000 °C	@Strain 6.00 %, Temperature 32.0 °F	
	2.01 GPa	291 ksi	ISO 11403-1 -2
	@Strain 2.60 %, Temperature 23.0 °C	@Strain 2.60 %, Temperature 73.4 °F	
	2.08 GPa	302 ksi	ISO 11403-1 -2
	@Strain 4.20 %, Temperature -40.0 °C	@Strain 4.20 %, Temperature -40.0 °F	
	2.20 GPa	319 ksi	ISO 11403-1 -2
	@Strain 2.90 %, Temperature 0.000 °C	@Strain 2.90 %, Temperature 32.0 °F	

Mechanical Properties	3.10 GPa Metric	450 ksi English	Comments
	@Strain 0.700 %, Temperature 0.000 °C	@Strain 0.700 %, Temperature 32.0 °F	ISO 11403-1 -2
	3.23 GPa	469 ksi	
	@Strain 0.600 %, Temperature 23.0 °C	@Strain 0.600 %, Temperature 73.4 °F	ISO 11403-1 -2
	3.65 GPa	529 ksi	
	@Strain 1.00 %, Temperature -40.0 °C	@Strain 1.00 %, Temperature -40.0 °F	ISO 11403-1 -2
Izod Impact, Notched (ISO)	9.00 kJ/m²	4.28 ft-lb/in²	ISO 180/1A
	8.00 kJ/m²	3.81 ft-lb/in²	
	@Temperature -30.0 °C	@Temperature -22.0 °F	ISO 180/1A
Charpy Impact Unnotched	32.5 J/cm²	155 ft-lb/in²	ISO 179/1eU
	27.5 J/cm²	131 ft-lb/in²	
	@Temperature -30.0 °C	@Temperature -22.0 °F	ISO 179/1eU
Charpy Impact, Notched	0.900 J/cm²	4.28 ft-lb/in²	ISO 179/1eA
	0.800 J/cm²	3.81 ft-lb/in²	
	@Temperature -30.0 °C	@Temperature -22.0 °F	ISO 179/1eA
Tensile Creep Modulus, 1 hour	2800 MPa	406000 psi	
	@Time 3600 sec	@Time 1.00 hour	ISO 899-1
Tensile Creep Modulus, 1000 hours	1600 MPa	232000 psi	
	@Time 3.60e+6 sec	@Time 1000 hour	ISO 899-1

Electrical Properties	Metric	English	Comments
Volume Resistivity	2.00e+14 ohm-cm	2.00e+14 ohm-cm	IEC 60093
Surface Resistance	4.00e+14 ohm	4.00e+14 ohm	IEC 60093

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