

DuPont Performance Polymers Delrin® 500PE BK602 Acetal (POM) (Unverified Data**)

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

Material Notes:

Medium Viscosity Acetal Homopolymer with Very Low Emissions Delrin 500PE BK602 (formerly DE20578) is a medium viscosity acetal homopolymer an enhanced version of Delrin 500P with very low VOC emissions. It has good mechanical properties and improved prlInformation provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Delrin-500PE-BK602-Acetal-POM-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.42 g/cc	0.0513 lb/in ³	ISO 1183
Viscosity	88855 cP	88855 cP	ISO 11403-1 -2
	@Shear Rate 5000 1/s, Temperature 230 °C	@Shear Rate 5000 1/s, Temperature 446 °F	
	90970 cP	90970 cP	ISO 11403-1 -2
	@Shear Rate 5000 1/s, Temperature 215 °C	@Shear Rate 5000 1/s, Temperature 419 °F	
	99370 cP	99370 cP	ISO 11403-1 -2
	@Shear Rate 5000 1/s, Temperature 200 °C	@Shear Rate 5000 1/s, Temperature 392 °F	
Linear Mold Shrinkage, Flow	254390 cP	254390 cP	ISO 11403-1 -2
	@Shear Rate 500 1/s, Temperature 230 °C	@Shear Rate 500 1/s, Temperature 446 °F	
	309200 cP	309200 cP	ISO 11403-1 -2
@Shear Rate 500 1/s, Temperature 215 °C	@Shear Rate 500 1/s, Temperature 419 °F		
Linear Mold Shrinkage, Transverse	350800 cP	350800 cP	ISO 11403-1 -2
	@Shear Rate 500 1/s, Temperature 200 °C	@Shear Rate 500 1/s, Temperature 392 °F	
Melt Flow	0.020 cm/cm	0.020 in/in	ISO 294-4 2577
	0.018 cm/cm	0.018 in/in	
Melt Flow	12 g/10 min	12 g/10 min	cm ³ /10min; ISO 1133
	@Load 2.16 kg, Temperature 190 °C	@Load 4.76 lb, Temperature 374 °F	
	14 g/10 min	14 g/10 min	

Physical Properties	@Load 2.16 kg, Metric Temperature 190 °C	@Load 4.76 lb, English Temperature 374 °F	ISO 1133 Comments
Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	93	93	ISO 2039-2
Hardness, Rockwell R	121	121	ISO 2039-2
Tensile Stress	5.90 MPa	856 psi	ISO 11403-1 -2
	@Strain 0.400 %, Temperature 90.0 °C	@Strain 0.400 %, Temperature 194 °F	
	17.2 MPa	2490 psi	ISO 11403-1 -2
	@Strain 0.500 %, Temperature 23.0 °C	@Strain 0.500 %, Temperature 73.4 °F	
	20.5 MPa	2970 psi	ISO 11403-1 -2
	@Strain 1.70 %, Temperature 90.0 °C	@Strain 1.70 %, Temperature 194 °F	
	22.6 MPa	3280 psi	ISO 11403-1 -2
	@Strain 0.600 %, Temperature 0.000 °C	@Strain 0.600 %, Temperature 32.0 °F	
	29.1 MPa	4220 psi	ISO 11403-1 -2
	@Strain 3.00 %, Temperature 90.0 °C	@Strain 3.00 %, Temperature 194 °F	
	34.1 MPa	4950 psi	ISO 11403-1 -2
	@Strain 4.40 %, Temperature 90.0 °C	@Strain 4.40 %, Temperature 194 °F	
	40.1 MPa	5820 psi	ISO 11403-1 -2
	@Strain 1.00 %, Temperature -40.0 °C	@Strain 1.00 %, Temperature -40.0 °F	
49.9 MPa	7240 psi	ISO 11403-1 -2	
@Strain 2.10 %, Temperature 23.0 °C	@Strain 2.10 %, Temperature 73.4 °F		
62.2 MPa	9020 psi	ISO 11403-1 -2	
@Strain 3.70 %, Temperature 23.0 °C	@Strain 3.70 %, Temperature 73.4 °F		
64.8 MPa	9400 psi	ISO 11403-1 -2	
@Strain 2.50 %, Temperature 0.000 °C	@Strain 2.50 %, Temperature 32.0 °F		
66.4 MPa	9630 psi	ISO 11403-1 -2	

Mechanical Properties	Metric @Strain 5.00 %, Temperature 23.0 °C	English @Strain 5.00 %, Temperature 73.4 °F	Comments
	79.0 MPa	11500 psi	
	@Strain 4.50 %, Temperature 0.000 °C	@Strain 4.50 %, Temperature 32.0 °F	ISO 11403-1 -2
	83.7 MPa	12100 psi	
	@Strain 7.00 %, Temperature 0.000 °C	@Strain 7.00 %, Temperature 32.0 °F	ISO 11403-1 -2
	90.8 MPa	13200 psi	
	@Strain 4.00 %, Temperature -40.0 °C	@Strain 4.00 %, Temperature -40.0 °F	ISO 11403-1 -2
	97.8 MPa	14200 psi	
	@Strain 7.00 %, Temperature -40.0 °C	@Strain 7.00 %, Temperature -40.0 °F	ISO 11403-1 -2
	98.4 MPa	14300 psi	
	@Strain 10.0 %, Temperature -40.0 °C	@Strain 10.0 %, Temperature -40.0 °F	ISO 11403-1 -2
Tensile Strength, Yield	73.5 MPa	10700 psi	ISO 527-1/-2
Elongation at Break	27 %	27 %	Nominal; ISO 527-1/-2
Elongation at Yield	13 %	13 %	ISO 527-1/-2
Tensile Modulus	3.35 GPa	486 ksi	ISO 527-1/-2
Flexural Strength	85.0 MPa	12300 psi	
	@Strain 3.50 %	@Strain 3.50 %	ISO 178
Flexural Modulus	3.15 GPa	457 ksi	ISO 178
Secant Modulus	0.758 GPa	110 ksi	
	@Strain 13.0 %, Temperature -40.0 °C	@Strain 13.0 %, Temperature -40.0 °F	ISO 11403-1 -2
	0.940 GPa	136 ksi	
	@Strain 9.00 %, Temperature 0.000 °C	@Strain 9.00 %, Temperature 32.0 °F	ISO 11403-1 -2
	0.984 GPa	143 ksi	
	@Strain 7.00 %, Temperature 23.0 °C	@Strain 7.00 %, Temperature 73.4 °F	ISO 11403-1 -2
	1.225 GPa	177.7 ksi	
	@Strain 8.00 %, Temperature -40.0 °C	@Strain 8.00 %, Temperature -40.0 °F	ISO 11403-1 -2

Mechanical Properties	Metric	English	Comments
	@Strain 4.30 %, Temperature 23.0 °C	@Strain 4.30 %, Temperature 73.4 °F	ISO 11403-1 -2
	1.612 GPa	233.8 ksi	
	@Strain 5.00 %, Temperature 0.000 °C	@Strain 5.00 %, Temperature 32.0 °F	ISO 11403-1 -2
	2.27 GPa	329 ksi	
	@Strain 4.00 %, Temperature -40.0 °C	@Strain 4.00 %, Temperature -40.0 °F	ISO 11403-1 -2
	2.38 GPa	345 ksi	
	@Strain 2.10 %, Temperature 23.0 °C	@Strain 2.10 %, Temperature 73.4 °F	ISO 11403-1 -2
	2.592 GPa	375.9 ksi	
	@Strain 2.50 %, Temperature 0.000 °C	@Strain 2.50 %, Temperature 32.0 °F	ISO 11403-1 -2
	3.44 GPa	499 ksi	
	@Strain 0.500 %, Temperature 23.0 °C	@Strain 0.500 %, Temperature 73.4 °F	ISO 11403-1 -2
	3.77 GPa	546 ksi	
	@Strain 0.600 %, Temperature 0.000 °C	@Strain 0.600 %, Temperature 32.0 °F	ISO 11403-1 -2
	4.01 GPa	582 ksi	
	@Strain 1.00 %, Temperature -40.0 °C	@Strain 1.00 %, Temperature -40.0 °F	ISO 11403-1 -2
Charpy Impact Unnotched	25.0 J/cm ²	119 ft-lb/in ²	ISO 179/1eU
	22.5 J/cm ²	107 ft-lb/in ²	
	@Temperature -30.0 °C	@Temperature -22.0 °F	ISO 179/1eU
Charpy Impact, Notched	0.900 J/cm ²	4.28 ft-lb/in ²	ISO 179/1eA
	0.850 J/cm ²	4.04 ft-lb/in ²	
	@Temperature -30.0 °C	@Temperature -22.0 °F	ISO 179/1eA

Thermal Properties	Metric	English	Comments
Melting Point	178 °C	352 °F	10°C/min; ISO 11357-1/-3
Deflection Temperature at 1.8 MPa (264 psi)	103 °C	217 °F	ISO 75-1/-2

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+15 ohm-cm	>= 1.00e+15 ohm-cm	IEC 60093
Surface Resistance	>= 1.00e+15 ohm	>= 1.00e+15 ohm	IEC 60093
Dielectric Constant	3.8	3.8	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Constant	3.9	3.9	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	43.0 kV/mm	1090 kV/in	IEC 60243-1
Dissipation Factor	0.00050	0.00050	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dissipation Factor	0.0055	0.0055	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	600 V	600 V	IEC 60112

Descriptive Properties	Value	Comments
Delivery Form	Pellets	
Emissions	<2 mg/kg	VDA 275
Part Marking Code	>POM<	ISO 11469
Processing	Injection Moulding	
Regional Availability	Asia Pacific	
	Europe	
	Global	
	Near East/Africa	
	North America	
	South and Central America	
Resin Identification	POM	ISO 1043

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