

DuPont Performance Polymers Delrin® 300PE BK602 Acetal (POM) (Unverified Data**)

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

Material Notes:

Medium-high Viscosity Acetal Homopolymer with Very Low Emissions Delrin 300PE BK602 (formerly DE20577) is a medium-high viscosity acetal homopolymer an enhanced version of Delrin 300CP with very low VOC emissions. It has very good mechanical propertiesInformation provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Delrin-300PE-BK602-Acetal-POM-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.42 g/cc	0.0513 lb/in³	ISO 1183
Viscosity	102500 cP	102500 cP	ISO 11403-1 -2
	@Shear Rate 5000 1/s, Temperature 230 °C	@Shear Rate 5000 1/s, Temperature 446 °F	
	104400 cP	104400 cP	ISO 11403-1 -2
	@Shear Rate 5000 1/s, Temperature 215 °C	@Shear Rate 5000 1/s, Temperature 419 °F	
	112500 cP	112500 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	369800 cP	369800 cP	ISO 11403-1 -2
	@Shear Rate 500 1/s, Temperature 230 °C	@Shear Rate 500 1/s, Temperature 446 °F	
	421400 cP	421400 cP	ISO 11403-1 -2
	@Shear Rate 500 1/s, Temperature 215 °C	@Shear Rate 500 1/s, Temperature 419 °F	
	452900 cP	452900 cP	ISO 11403-1 -2
	@Shear Rate 500 1/s, Temperature 200 °C	@Shear Rate 500 1/s, Temperature 392 °F	
Linear Mold Shrinkage, Transverse	0.020 cm/cm	0.020 in/in	ISO 294-4 2577
Linear Mold Shrinkage, Transverse	0.018 cm/cm	0.018 in/in	ISO 294-4 2577
Melt Flow	6.0 g/10 min	6.0 g/10 min	cm³/10min; ISO 1133
	@Load 2.16 kg, Temperature 190 °C	@Load 4.76 lb, Temperature 374 °F	
	7.0 g/10 min	7.0 g/10 min	

Physical Properties	Metric @Load 2.16 kg, Temperature 190 °C	English @Load 4.76 lb, Temperature 374 °F	ISO 1133 Comments
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Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	93	93	ISO 2039-2
Hardness, Rockwell R	121	121	ISO 2039-2
Tensile Stress	5.60 MPa	812 psi	ISO 11403-1 -2
	@Strain 0.400 %, Temperature 90.0 °C	@Strain 0.400 %, Temperature 194 °F	
	19.1 MPa	2770 psi	ISO 11403-1 -2
	@Strain 1.80 %, Temperature 90.0 °C	@Strain 1.80 %, Temperature 194 °F	
	20.0 MPa	2900 psi	ISO 11403-1 -2
	@Strain 0.600 %, Temperature 23.0 °C	@Strain 0.600 %, Temperature 73.4 °F	
	26.8 MPa	3890 psi	ISO 11403-1 -2
	@Strain 3.20 %, Temperature 90.0 °C	@Strain 3.20 %, Temperature 194 °F	
	30.9 MPa	4480 psi	ISO 11403-1 -2
	@Strain 4.60 %, Temperature 90.0 °C	@Strain 4.60 %, Temperature 194 °F	
	34.1 MPa	4950 psi	ISO 11403-1 -2
	@Strain 0.800 %, Temperature -40.0 °C	@Strain 0.800 %, Temperature -40.0 °F	
	52.1 MPa	7560 psi	ISO 11403-1 -2
	@Strain 1.80 %, Temperature 0.000 °C	@Strain 1.80 %, Temperature 32.0 °F	
	54.3 MPa	7880 psi	ISO 11403-1 -2
	@Strain 2.60 %, Temperature 23.0 °C	@Strain 2.60 %, Temperature 73.4 °F	
	65.2 MPa	9460 psi	ISO 11403-1 -2
	@Strain 4.70 %, Temperature 23.0 °C	@Strain 4.70 %, Temperature 73.4 °F	
	68.6 MPa	9950 psi	ISO 11403-1 -2
	@Strain 7.00 %, Temperature 23.0 °C	@Strain 7.00 %, Temperature 73.4 °F	
	77.6 MPa	11300 psi	ISO 11403-1 -2

Mechanical Properties	Metric @Strain 7.00 %, Temperature 0.000 °C	English @Strain 7.00 %, Temperature 32.0 °F	Comments
	79.1 MPa	11500 psi	
	@Strain 12.0 %, Temperature 0.000 °C	@Strain 12.0 %, Temperature 32.0 °F	ISO 11403-1 -2
	79.3 MPa	11500 psi	
	@Strain 18.0 %, Temperature 0.000 °C	@Strain 18.0 %, Temperature 32.0 °F	ISO 11403-1 -2
	87.1 MPa	12600 psi	
	@Strain 3.40 %, Temperature -40.0 °C	@Strain 3.40 %, Temperature -40.0 °F	ISO 11403-1 -2
	96.3 MPa	14000 psi	
	@Strain 6.00 %, Temperature -40.0 °C	@Strain 6.00 %, Temperature -40.0 °F	ISO 11403-1 -2
	98.2 MPa	14200 psi	
	@Strain 9.00 %, Temperature -40.0 °C	@Strain 9.00 %, Temperature -40.0 °F	ISO 11403-1 -2
Tensile Strength, Yield	72.5 MPa	10500 psi	ISO 527-1/-2
Elongation at Break	35 %	35 %	Nominal; ISO 527-1/-2
Elongation at Yield	16 %	16 %	ISO 527-1/-2
Tensile Modulus	3.30 GPa	479 ksi	ISO 527-1/-2
Flexural Strength	84.0 MPa	12200 psi	
	@Strain 3.50 %	@Strain 3.50 %	ISO 178
Flexural Modulus	3.10 GPa	450 ksi	ISO 178
Secant Modulus	0.548 GPa	79.4 ksi	
	@Strain 12.8 %, Temperature 23.0 °C	@Strain 12.8 %, Temperature 73.4 °F	ISO 11403-1 -2
	0.566 GPa	82.2 ksi	
	@Strain 14.0 %, Temperature 0.000 °C	@Strain 14.0 %, Temperature 32.0 °F	ISO 11403-1 -2
	0.660 GPa	95.7 ksi	
	@Strain 15.0 %, Temperature -40.0 °C	@Strain 15.0 %, Temperature -40.0 °F	ISO 11403-1 -2
	0.774 GPa	112 ksi	
	@Strain 9.00 %, Temperature 23.0 °C	@Strain 9.00 %, Temperature 73.4 °F	ISO 11403-1 -2

Mechanical Properties	Metric	English	Comments
	@Strain 11.0 %, Temperature -40.0 °C	@Strain 11.0 %, Temperature -40.0 °F	ISO 11403-1 -2
	1.11 GPa	161 ksi	
	@Strain 7.00 %, Temperature 0.000 °C	@Strain 7.00 %, Temperature 32.0 °F	ISO 11403-1 -2
	1.32 GPa	191 ksi	
	@Strain 5.00 %, Temperature 23.0 °C	@Strain 5.00 %, Temperature 73.4 °F	ISO 11403-1 -2
	1.39 GPa	201 ksi	
	@Strain 7.00 %, Temperature -40.0 °C	@Strain 7.00 %, Temperature -40.0 °F	ISO 11403-1 -2
	2.09 GPa	303 ksi	
	@Strain 2.60 %, Temperature 23.0 °C	@Strain 2.60 %, Temperature 73.4 °F	ISO 11403-1 -2
	2.56 GPa	372 ksi	
	@Strain 3.40 %, Temperature -40.0 °C	@Strain 3.40 %, Temperature -40.0 °F	ISO 11403-1 -2
	2.89 GPa	420 ksi	
	@Strain 1.80 %, Temperature 0.000 °C	@Strain 1.80 %, Temperature 32.0 °F	ISO 11403-1 -2
	3.33 GPa	483 ksi	
	@Strain 0.600 %, Temperature 23.0 °C	@Strain 0.600 %, Temperature 73.4 °F	ISO 11403-1 -2
	4.2625 GPa	618.23 ksi	
	@Strain 0.800 %, Temperature -40.0 °C	@Strain 0.800 %, Temperature -40.0 °F	ISO 11403-1 -2
Charpy Impact Unnotched	27.5 J/cm ²	131 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	1.00 J/cm ²	4.76 ft-lb/in ²	ISO 179/1eA
	1.00 J/cm ²	4.76 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

Thermal Properties	Metric	English	Comments
Tensile Strength at 1.8 MPa (264 psi)	10.00e+01 MPa	10.00e+01 MPa	ISO 1037-2

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+15 ohm-cm	>= 1.00e+15 ohm-cm	IEC 60093
Surface Resistance	3.00e+14 ohm	3.00e+14 ohm	IEC 60093
Dielectric Constant	3.9	3.9	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	3.9	3.9	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Strength	43.0 kV/mm	1090 kV/in	IEC 60243-1
Dissipation Factor	0.0010	0.0010	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	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
Additives	Release agent	
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

Descriptive Properties	Value	Comments
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