

DuPont Performance Polymers Delrin® 100P BK602 Acetal Homopolymer (Unverified Data**)

Category : Polymer , Thermoplastic , Acetal (POM)

Material Notes:

Delrin® 100P is a high viscosity acetal homopolymer for use in easy to fill molds. Delrin® 100P provides maximum toughness in the product line without modification. Delrin® 100P has improved processing thermal stability. Information provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Delrin-100P-BK602-Acetal-Homopolymer-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.42 g/cc	0.0513 lb/in ³	ISO 1183
Linear Mold Shrinkage, Flow	0.021 cm/cm @Thickness 2.00 mm	0.021 in/in @Thickness 0.0787 in	ISO 294-4
Linear Mold Shrinkage, Transverse	0.018 cm/cm @Thickness 2.00 mm	0.018 in/in @Thickness 0.0787 in	ISO 294-4
Melt Flow	2.5 g/10 min @Load 2.16 kg, Temperature 190 °C	2.5 g/10 min @Load 4.76 lb, Temperature 374 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	71.0 MPa @Temperature 23.0 °C	10300 psi @Temperature 73.4 °F	ISO 527
Elongation at Break	35 % @Temperature 23.0 °C	35 % @Temperature 73.4 °F	nominal; ISO 527
	50 % @Temperature 23.0 °C	50 % @Temperature 73.4 °F	50mm/min; ISO 527
Elongation at Yield	22 % @Temperature 23.0 °C	22 % @Temperature 73.4 °F	ISO 527
Tensile Modulus	3.00 GPa @Temperature 23.0 °C	435 ksi @Temperature 73.4 °F	ISO 527
Flexural Modulus	2.80 GPa @Temperature 23.0 °C	406 ksi @Temperature 73.4 °F	ISO 178
	30.0 J/cm ²	143 ft-lb/in ²	

Charpy Impact Unnotched Mechanical Properties	Metric @ Temperature 23.0 °C	English @ Temperature 73.4 °F	ISO 179/1eJ Comments
Charpy Impact, Notched	0.900 J/cm ²	4.28 ft-lb/in ²	ISO 179/1eA
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	1.00 J/cm ²	4.76 ft-lb/in ²	ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	1.10 J/cm ²	5.23 ft-lb/in ²	ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	500 µm/m-°C	278 µin/in-°F	ISO 11359-1/-2
	@Temperature 55.0 - 100 °C	@Temperature 131 - 212 °F	
	500 µm/m-°C	278 µin/in-°F	
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	ISO 11359-1/-2
	500 µm/m-°C	278 µin/in-°F	ISO 11359-1/-2
	@Temperature -40.0 - 23.0 °C	@Temperature -40.0 - 73.4 °F	
CTE, linear, Transverse 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	
	110 µm/m-°C	61.1 µin/in-°F	
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	ISO 11359-1/-2
	150 µm/m-°C	83.3 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
Deflection Temperature at 0.46 MPa (66 psi)	165 °C	329 °F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	93.0 °C	199 °F	ISO 75-1/-2
UL RTI, Electrical	50.0 °C	122 °F	UL 746B
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	110 °C	230 °F	UL 746B

Thermal Properties	@Thickness 3.00 mm Metric	@Thickness 0.118 in English	Comments
	110 °C	230 °F	UL 746B
	@Thickness 1.50 mm	@Thickness 0.0591 in	
UL RTI, Mechanical with Impact	50.0 °C	122 °F	UL 746B
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	85.0 °C	185 °F	UL 746B
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	90.0 °C	194 °F	UL 746B
	@Thickness 3.00 mm	@Thickness 0.118 in	
UL RTI, Mechanical without Impact	50.0 °C	122 °F	UL 746B
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	90.0 °C	194 °F	UL 746B
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	95.0 °C	203 °F	UL 746B
	@Thickness 3.00 mm	@Thickness 0.118 in	
Flammability, UL94	HB	HB	IEC 60695-11-10
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	HB	HB	IEC 60695-11-10
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	HB	HB	IEC 60695-11-10
	@Thickness 3.00 mm	@Thickness 0.118 in	
	HB	HB	UL94
	@Thickness 3.00 mm	@Thickness 0.118 in	
	HB	HB	UL94
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	HB	HB	UL94
	@Thickness 1.50 mm	@Thickness 0.0591 in	

Processing Properties	Metric	English	Comments
Melt Temperature	210 - 220 °C	410 - 428 °F	Injection Molding
	215 °C	419 °F	Optimum; Injection Molding

Mold Temperature Processing Properties	80.0 - 100 °C Metric	176 - 212 °F English	Injection Molding Comments
	90.0 °C	194 °F	optimum; 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	Black Color	
Extrudable - Cast Film	Yes	
Extrudable - Sheet	Yes	
Extrudable - Tubing	Yes	
Extrudable - Wire and Cable	Yes	
Features	Creep Resistance, Good	
	Dimensional Stability, Good	
	Fatigue Resistant	
	Homopolymer	
	Impact Resistance, High	
	Molecular Wt., High	
	Stiffness, High	
	Strength, High	
	Toughness, Good	
	Viscosity, High	
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	Extrusion Value	Comments
	Injection Molding	
Product Category	Extrusion Resins	
	Unreinforced Resins	
Region Available - Global	Yes	
Resin Identification	POM	ISO 1043
RoHS Compliance	Contact Manufacturer	
Ultrasonic Weldable	Yes	
Uses	Automotive Interior Parts	
	Conveyors	
	Fasteners	
	Gears	
	Housings	
	Parts, Engineering	
	Sheet	
	Tubing	

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