

DuPont Performance Polymers Delrin® 500CL BK601 Acetal Homopolymer (Unverified Data**)

Category : Polymer , Thermoplastic , Acetal (POM)

Material Notes:

Delrin® 500CL BK601 is a medium viscosity acetal homopolymer containing a chemical lubricant, designed for low wear and friction against metals. Information provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Delrin-500CL-BK601-Acetal-Homopolymer-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
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	67.0 MPa	9720 psi	ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Elongation at Break	18 %	18 %	nominal; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	23 %	23 %	50mm/min; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Elongation at Yield	13 %	13 %	ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Modulus	3.20 GPa	464 ksi	ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Flexural Modulus	2.90 GPa	421 ksi	ISO 178
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	0.800 J/cm²	3.81 ft-lb/in²	ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	0.900 J/cm²	4.28 ft-lb/in²	ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
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)	168 °C	328 °F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	90.0 °C	194 °F	ISO 75-1/-2
UL RTI, Electrical	50.0 °C @Thickness 0.750 mm	122 °F @Thickness 0.0295 in	UL 746B
	100 °C @Thickness 1.50 mm	212 °F @Thickness 0.0591 in	UL 746B
	100 °C @Thickness 3.00 mm	212 °F @Thickness 0.118 in	UL 746B
UL RTI, Mechanical with Impact	50.0 °C @Thickness 0.750 mm	122 °F @Thickness 0.0295 in	UL 746B
	80.0 °C @Thickness 1.50 mm	176 °F @Thickness 0.0591 in	UL 746B
	80.0 °C @Thickness 3.00 mm	176 °F @Thickness 0.118 in	UL 746B
UL RTI, Mechanical without Impact	50.0 °C @Thickness 0.750 mm	122 °F @Thickness 0.0295 in	UL 746B
	85.0 °C @Thickness 1.50 mm	185 °F @Thickness 0.0591 in	UL 746B
	85.0 °C @Thickness 3.00 mm	185 °F @Thickness 0.118 in	UL 746B
Flammability, UL94	HB @Thickness 1.50 mm	HB @Thickness 0.0591 in	IEC 60695-11-10
	HB @Thickness 3.00 mm	HB @Thickness 0.118 in	IEC 60695-11-10
	HB @Thickness 0.750 mm	HB @Thickness 0.0295 in	IEC 60695-11-10
	HB @Thickness 0.750 mm	HB @Thickness 0.0295 in	UL94
	HB @Thickness 1.50 mm	HB @Thickness 0.0591 in	UL94

Thermal Properties	Metric	English	Comments
	HB	HB	UL94
	@Thickness 3.00 mm	@Thickness 0.118 in	

Electrical Properties	Metric	English	Comments
Comparative Tracking Index	600 V	600 V	IEC 60112
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	600 V	600 V	UL 746A
	@Thickness 3.00 mm, Temperature 23.0 °C	@Thickness 0.118 in, Temperature 73.4 °F	

Processing Properties	Metric	English	Comments
Melt Temperature	215 °C	419 °F	Optimum; Injection Molding
	210 - 220 °C	410 - 428 °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
Additive	Lubricant	
Appearance	Black Color	
Drying Recommended	Not normally required unless moisture content of resin exceeds recommended level	
Features	Creep Resistance, Good	
	Friction, Low	
	Homopolymer	
	Lubricated	
	Stiffness, High	
	Strength, High	
	Viscosity, Medium	

Descriptive Properties	Wear Resistance, Good Value	Comments
Forms	Pellets	
Generic	Acetal (POM) Homopolymer	
Material Status	Current	
Part Marking Code	>POM<	ISO 11469
Polymer Family	POM	
Polymer Type	POM Homopolymer	
Processing Method	Extrusion	
	Injection Molding	
Product Category	Low Wear and Friction Resins	
	Unreinforced Resins	
Region Available - Global	Yes	
Resin Identification	POM	ISO 1043
RoHS Compliance	Contact Manufacturer	
Ultrasonic Weldable	Yes	
Uses	Automotive Applications	
	Gears	
	Parts, Engineering	

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