

DuPont Performance Polymers Delrin® 311DP BK402 Acetal Homopolymer (Unverified Data**)

Category : Polymer , Thermoplastic , Acetal (POM)

Material Notes:

Delrin® 311DP BK402 is a medium high viscosity acetal homopolymer with improved thermal stability and modifications for more precise molding(reduced warpage, less shrinkage, fewer voids).Information provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Delrin-311DP-BK402-Acetal-Homopolymer-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.42 g/cc	0.0513 lb/in ³	ISO 1183
Melt Flow	7.0 g/10 min @Load 2.16 kg, Temperature 190 °C	7.0 g/10 min @Load 4.76 lb, Temperature 374 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	74.0 MPa @Temperature 23.0 °C	10700 psi @Temperature 73.4 °F	ISO 527
Elongation at Break	25 % @Temperature 23.0 °C	25 % @Temperature 73.4 °F	nominal; ISO 527
	35 % @Temperature 23.0 °C	35 % @Temperature 73.4 °F	50mm/min; ISO 527
Elongation at Yield	15 % @Temperature 23.0 °C	15 % @Temperature 73.4 °F	ISO 527
Tensile Modulus	3.30 GPa @Temperature 23.0 °C	479 ksi @Temperature 73.4 °F	ISO 527
Charpy Impact, Notched	0.800 J/cm ² @Temperature -30.0 °C	3.81 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eA
	0.800 J/cm ² @Temperature 23.0 °C	3.81 ft-lb/in ² @Temperature 73.4 °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 (104 psi) Thermal Properties	103 °C Metric	217 °F English	ISO 75-1/-2 Comments
UL RTI, Electrical	50.0 °C	122 °F	UL 746B
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	110 °C	230 °F	UL 746B
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	110 °C	230 °F	UL 746B
	@Thickness 3.00 mm	@Thickness 0.118 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 1.50 mm	@Thickness 0.0591 in	
	HB	HB	UL94
	@Thickness 3.00 mm	@Thickness 0.118 in	
	HB	HB	UL94
	@Thickness 0.750 mm	@Thickness 0.0295 in	

Thermal Properties	Metric	English	Comments
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
Appearance	Black Color	
Drying Recommended	Not normally required unless moisture content of resin exceeds recommended level	
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, Good	
	Stiffness, High	
	Strength, High	
	Viscosity, Medium-high	
Forms	Pellets	
Generic	Acetal (POM) Homopolymer	
Material Status	Current	
Part Marking Code	>POM<	ISO 11469

Descriptive Properties Polymer Family	Value POM	Comments
Polymer Type	POM Homopolymer	
Processing Method	Injection Molding	
Product Category	Unreinforced Resins	
Region Available - Global	Yes	
Resin Identification	POM	ISO 1043
RoHS Compliance	Contact Manufacturer	
Ultrasonic Weldable	Yes	
Uses	Automotive Interior Parts	
	Fasteners	
	Gears	
	Parts, Engineering	
	Tubing	

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