

## DuPont Performance Polymers Delrin® 527UV BK701 Acetal Homopolymer (Unverified Data\*\*)

Category : Polymer , Thermoplastic , Acetal (POM)

### Material Notes:

Delrin® 527UV BK701 is a medium viscosity black acetal homopolymer resin with UV stabilizers developed for automotive interior applications. It has improvements in UV aging characteristics and thermal stability over Delrin® 507. Information provided by DuPont Performance Polymers

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_DuPont-Performance-Polymers-Delrin-527UV-BK701-Acetal-Homopolymer-nbspUnverified-Data.php](http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Delrin-527UV-BK701-Acetal-Homopolymer-nbspUnverified-Data.php)

Physical Properties	Metric	English	Comments
Density	1.41 g/cc	0.0509 lb/in <sup>3</sup>	ISO 1183
Linear Mold Shrinkage, Flow	0.018 cm/cm @Thickness 4.00 mm	0.018 in/in @Thickness 0.157 in	ISO 294-4
Melt Flow	15 g/10 min @Load 2.16 kg, Temperature 190 °C	15 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	23 % @Temperature 23.0 °C	23 % @Temperature 73.4 °F	nominal; ISO 527
	35 % @Temperature 23.0 °C	35 % @Temperature 73.4 °F	50mm/min; ISO 527
Elongation at Yield	14 % @Temperature 23.0 °C	14 % @Temperature 73.4 °F	ISO 527
Tensile Modulus	3.20 GPa @Temperature 23.0 °C	464 ksi @Temperature 73.4 °F	ISO 527
Flexural Modulus	3.00 GPa @Temperature 23.0 °C	435 ksi @Temperature 73.4 °F	ISO 178
Izod Impact, Notched (ISO)	7.00 kJ/m <sup>2</sup> @Temperature 23.0 °C	3.33 ft-lb/in <sup>2</sup> @Temperature 73.4 °F	ISO 180/1A

Mechanical Properties	Metric	English	Comments
	0.700 J/cm <sup>2</sup>	3.33 ft-lb/in <sup>2</sup>	
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	0.900 J/cm <sup>2</sup>	4.28 ft-lb/in <sup>2</sup>	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 -40.0 - 23.0 °C	@Temperature -40.0 - 73.4 °F	
	500 µm/m-°C	278 µin/in-°F	
CTE, linear, Transverse to Flow	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	ISO 11359-1/-2
	500 µm/m-°C	278 µin/in-°F	
	@Temperature 55.0 - 100 °C	@Temperature 131 - 212 °F	
CTE, linear, Parallel to Flow	97.0 µm/m-°C	53.9 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	
CTE, linear, Transverse to Flow	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	ISO 11359-1/-2
	160 µm/m-°C	88.9 µin/in-°F	
	@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)	163 °C	325 °F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	92.0 °C	198 °F	ISO 75-1/-2
UL RTI, Electrical	50.0 °C	122 °F	UL 746B
	@Thickness 0.840 mm	@Thickness 0.0331 in	
UL RTI, Mechanical with Impact	50.0 °C	122 °F	UL 746B
	@Thickness 0.840 mm	@Thickness 0.0331 in	
UL RTI, Mechanical without Impact	50.0 °C	122 °F	UL 746B
	@Thickness 0.840 mm	@Thickness 0.0331 in	
	HB	HB	

Flammability, UL 94 Thermal Properties	Metric @ Thickness 0.840 mm	English @ Thickness 0.0331 in	IEC 60695-11-10 Comments
	HB	HB	UL94
	@Thickness 0.840 mm	@Thickness 0.0331 in	

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	UV Stabilizer	
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	
	Fatigue Resistant	
	Homopolymer	
	Impact Resistance, Good	
	Stiffness, High	
	Strength, High	
	UV Resistance, Good	
	Viscosity, Medium	

Descriptive Properties	Value	Comments
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	Unreinforced Resins	
	UV Resistant/Weatherable Resins	
Region Available - Global	Yes	
Resin Identification	POM	ISO 1043
RoHS Compliance	Contact Manufacturer	
Ultrasonic Weldable	Yes	
Uses	Automotive Interior Parts	
	Parts, Engineering	

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