Delrin® 900P BK602

Acetal (POM) Homopolymer

DuPont Engineering Polymers

IDES | Prospector

Product Description
Delrin® 900P BK602 is a low viscosity black acetal homopolymer resin for multicavity and thin wall molding. It offers an improved processing thermal stability.

General			
Material Status	• Commercial: Active		
Availability	• Asia Pacific	• Europe	• North America
Features	• Fatigue Resistant • Good Creep Resistance • Good Dimensional Stability	• High Stiffness • High Strength • Homopolymer	• Low Viscosity • Ultrasonic Weldable
Uses	• Engineering Parts • Gears	• General Purpose • Thin-walled Parts	
RoHS Compliance	• Contact Manufacturer		
Appearance	• Black		
Forms	• Pellets		
Processing Method	• Injection Molding		
Part Marking Code (ISO 11469)	• >POM<		
Resin ID (ISO 1043)	• POM		

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.42 g/cm³	1.42 g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	25 g/10 min	25 g/10 min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow: 0.0787 in (2.00 mm)	1.7 %	1.7 %	
Flow: 0.0787 in (2.00 mm)	1.8 %	1.8 %	
Mechanical	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Tensile Modulus (73°F (23°C))	479000 psi	3300 MPa	ISO 527-2
Tensile Stress (Yield, 73°F (23°C))	10200 psi	70.0 MPa	ISO 527-2
Tensile Strain			ISO 527-2
Yield, 73°F (23°C)	12 %	12 %	
Break, 73°F (23°C)	22 %	22 %	
Nominal Tensile Strain at Break			ISO 527-2
73°F (23°C)	17 %	17 %	
Flexural Modulus (73°F (23°C))	435000 psi	3000 MPa	ISO 178
Impact	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-40°F (-40°C)	3.8 ft·lb/in²	8.0 kJ/m²	
-22°F (-30°C)	2.9 ft·lb/in²	6.0 kJ/m²	
73°F (23°C)	3.3 ft·lb/in²	7.0 kJ/m²	
Charpy Unnotched Impact Strength			ISO 179/1eU
73°F (23°C)	62 ft·lb/in²	130 kJ/m²	
Notched Izod Impact Strength			ISO 180/1A
-40°F (-40°C)	3.3 ft·lb/in²	7.0 kJ/m²	
73°F (23°C)	3.3 ft·lb/in²	7.0 kJ/m²	
Thermal	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Heat Deflection Temperature			
66 psi (0.45 MPa), Unannealed	322 °F	161 °C	ISO 75-2/B
264 psi (1.8 MPa), Unannealed	208 °F	98.0 °C	ISO 75-2/A
Melting Temperature [2]	352 °F	178 °C	ISO 11357-3
CLTE			ISO 11359-2
Flow: -40 to 73°F (-40 to 23°C)	0.000050 in/in/°F	0.000090 cm/cm/°C	
Flow: 73 to 131°F (23 to 55°C)	0.000056 in/in/°F	0.00010 cm/cm/°C	
Flow: 131 to 212°F (55 to 100°C)	0.000072 in/in/°F	0.00013 cm/cm/°C	
Transverse: -40 to 73°F (-40 to 23°C)	0.000050 in/in/°F	0.000090 cm/cm/°C	
Transverse: 73 to 131°F (23 to 55°C)	0.000056 in/in/°F	0.00010 cm/cm/°C	
Transverse: 131 to 212°F (55 to 100°C)	0.000072 in/in/°F	0.00013 cm/cm/°C	

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Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating - UL			UL 94
0.0295 in (0.750 mm)	HB	HB	
0.0591 in (1.50 mm)	HB	HB	
0.118 in (3.00 mm)	HB	HB	
Flammability Classification			IEC 60695-11-10, -20
0.0295 in (0.750 mm)	HB	HB	
0.0591 in (1.50 mm)	HB	HB	
0.118 in (3.00 mm)	HB	HB	

UL 746	Nominal Value (English)	Nominal Value (SI)	Test Method
RTI Str			UL 746
0.0295 in (0.750 mm)	122 °F	50.0 °C	
0.0591 in (1.50 mm)	194 °F	90.0 °C	
0.118 in (3.00 mm)	203 °F	95.0 °C	
RTI Imp			UL 746
0.0295 in (0.750 mm)	122 °F	50.0 °C	
0.0591 in (1.50 mm)	185 °F	85.0 °C	
0.118 in (3.00 mm)	194 °F	90.0 °C	
RTI Elec			UL 746
0.0295 in (0.750 mm)	122 °F	50.0 °C	
0.0591 in (1.50 mm)	230 °F	110 °C	
0.118 in (3.00 mm)	230 °F	110 °C	

Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	176 °F	80.0 °C
Drying Time	2.0 to 4.0 hr	2.0 to 4.0 hr
Suggested Max Moisture	< 0.20 %	< 0.20 %
Processing (Melt) Temp	410 to 428 °F	210 to 220 °C
Melt Temperature, Optimum		
Injection Molding	419 °F	215 °C
Mold Temperature	176 to 212 °F	80.0 to 100 °C
Mold Temperature, Optimum		
Injection Molding	194 °F	90 °C
Drying Recommended	Not normally required unless moisture content of resin exceeds recommended level	Not normally required unless moisture content of resin exceeds recommended level

Notes

[1] Typical properties: these are not to be construed as specifications.

[2] 10°C/min

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