

DUPONT Delrin[®] 900P

Low Viscosity Acetal Homopolymer with Improved Processing
Information provided by DuPont; Delrin was sold by DuPont in 2023.

Physical Properties	Metric	English	Comments
Density	1.42 g/cc	0.0513 lb/in ³	ISO 1183
Water Absorption	1.4 % @Thickness 2.00 mm	1.4 % @Thickness 0.0787 in	Sim. to ISO 62
Moisture Absorption	0.400 % @Thickness 2.00 mm	0.400 % @Thickness 0.0787 in	Sim. to ISO 62
Linear Mold Shrinkage, Flow	0.019 cm/cm	0.019 in/in	ISO 294-4, 2577
Linear Mold Shrinkage, Transverse	0.019 cm/cm	0.019 in/in	ISO 294-4, 2577
Melt Flow	21 g/10 min @Load 2.16 kg, Temperature 190 °C	21 g/10 min @Load 4.76 lb, Temperature 374 °F	cm ³ /10min Volumetric; ISO 1133
	25 g/10 min @Load 2.16 kg, Temperature 190 °C	25 g/10 min @Load 4.76 lb, Temperature 374 °F	ISO 1133
Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	92	92	ISO 2039-2
Hardness, Rockwell R	120	120	ISO 2039-2
Ball Indentation Hardness	170 MPa	24700 psi	H 961/30; ISO 2039-1
Tensile Strength, Yield	71.0 MPa	10300 psi	ISO 527-1/-2
Elongation at Break	23 %	23 %	Nominal; ISO 527-1/-2
Elongation at Yield	12 %	12 %	ISO 527-1/-2
Tensile Modulus	3.20 GPa	464 ksi	ISO 527-1/-2
Flexural Modulus	3.00 GPa	435 ksi	ISO 178
Poissons Ratio	0.37	0.37	
Izod Impact, Notched (ISO)	7.00 kJ/m ² @Temperature 23.0 °C	3.33 ft-lb/in ² @Temperature 73.4 °F	ISO 180/1A
Charpy Impact Unnotched	8.00 kJ/m ² @Temperature -40.0 °C	3.81 ft-lb/in ² @Temperature -40.0 °F	ISO 180/1A
	20.0 J/cm ² @Temperature -30.0 °C	95.2 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eU
	20.0 J/cm ² @Temperature 23.0 °C	95.2 ft-lb/in ² @Temperature 73.4 °F	ISO 179/1eU
	0.650 J/cm ² @Temperature -30.0 °C	3.09 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eA
Charpy Impact, Notched	0.750 J/cm ² @Temperature 23.0 °C	3.57 ft-lb/in ² @Temperature 73.4 °F	ISO 179/1eA
Tensile Creep Modulus, 1 hour	2800 MPa	406000 psi	1h; ISO 899-1

Tensile Creep Modulus, 1000 hours 1500 MPa 218000 psi 1000h; ISO 899-1

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+14 ohm-cm	1.00e+14 ohm-cm	IEC 62631-3-1
Surface Resistance	>= 1.00e+15 ohm	>= 1.00e+15 ohm	IEC 62631-3-2
Dielectric Constant	3.8 @Frequency 1e+6 Hz	3.8 @Frequency 1e+6 Hz	IEC 62631-2-1
	3.8 @Frequency 100 Hz	3.8 @Frequency 100 Hz	IEC 62631-2-1
Comparative Tracking Index	600 V	600 V	IEC 60112
Hot Wire Ignition, HWI	8.0 sec @Thickness 0.750 mm	8.0 sec @Thickness 0.0295 in	UL 746A

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	120 µm/m-°C	66.7 µin/in-°F	ISO 11359-1/-2
CTE, linear, Transverse to Flow	120 µm/m-°C	66.7 µin/in-°F	ISO 11359-1/-2
Melting Point	178 °C	352 °F	10°C/min; ISO 11357-1/-3
Deflection Temperature at 0.46 MPa (66 psi)	162 °C	324 °F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	94.0 °C	201 °F	ISO 75-1/-2
Vicat Softening Point	160 °C	320 °F	50°C/h, 50N; ISO 306
Flammability, UL94	HB @Thickness 0.800 mm	HB @Thickness 0.0315 in	IEC 60695-11-10
	HB @Thickness 1.50 mm	HB @Thickness 0.0591 in	IEC 60695-11-10
Flame Spread	20.0 mm/min @Thickness 1.00 mm	0.787 in/min @Thickness 0.0394 in	ISO 3795 (FMVSS 302)
Oxygen Index	23 %	23 %	ISO 4589-1/-2

Processing Properties	Metric	English	Comments
Melt Temperature	215 °C	419 °F	Optimum, Injection
	210 - 220 °C	410 - 428 °F	Range, Injection
Mold Temperature	90.0 °C	194 °F	Optimum, Injection

	80.0 - 100 °C	176 - 212 °F	Injection
Drying Temperature	80.0 °C	176 °F	Injection
Dry Time	2.00 - 4.00 hour	2.00 - 4.00 hour	Injection, Dehumidified Dryer
Moisture Content	<= 0.20 %	<= 0.20 %	Injection
Hold Pressure	80.0 - 100 MPa	11600 - 14500 psi	Injection
	100 MPa	14500 psi	Injection
Annealing Temperature	160 °C	320 °F	Optional; 2 mm/min; Injection

Descriptive Properties			
Additives	Release agent		
Annealing time (min/mm)	30	Optional, Injection	
Drying Recommended	yes	Injection	
Eff. thermal diffusivity (m ² /s)	8E-08		
Emissions (mg/kg)	<8	VDA 275	
FMVSS Class	B	ISO 3795 (FMVSS 302)	
Fogging (%)	95	F-value (refraction); ISO 6452	
Fogging (mg)	0.2	G-value (condensate); ISO 6452	
Max. screw tangential speed (m/s)	0.3	Injection	
Part Marking Code	>POM<	ISO 11469	
Polymer	POM		
Processing Hold Pressure Time (s/mm)	8	Injection	
Resin Identification	POM	ISO 1043	