

# DUPONT Delrin<sup>®</sup> 520MP

20% Teflon<sup>®</sup> Lubricated Medium Viscosity Acetal Homopolymer with Low Wear and Low Friction  
Information provided by DuPont; Delrin was sold by DuPont in 2023.

Physical Properties	Metric	English	Comments
Density	1.54 g/cc	0.0556 lb/in <sup>3</sup>	ISO 1183
Linear Mold Shrinkage, Flow	0.019 cm/cm	0.019 in/in	ISO 294-4, 2577
Linear Mold Shrinkage, Transverse	0.015 cm/cm	0.015 in/in	ISO 294-4, 2577
Melt Flow	8.0 g/10 min @Load 2.16 kg, Temperature 190 °C	8.0 g/10 min @Load 4.76 lb, Temperature 374 °F	ISO 1133
Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	85	85	ISO 2039-2
Hardness, Rockwell R	121	121	ISO 2039-2
Tensile Strength, Yield	53.0 MPa	7690 psi	ISO 527-1/-2
Elongation at Break	10 %	10 %	Nominal; ISO 527-1/-2
Elongation at Yield	13 %	13 %	ISO 527-1/-2
Tensile Modulus	2.90 GPa	421 ksi	ISO 527-1/-2
Flexural Modulus	2.70 GPa	392 ksi	ISO 178
Poissons Ratio	0.37	0.37	
Izod Impact, Notched (ISO)	4.00 kJ/m <sup>2</sup> @Temperature 23.0 °C	1.90 ft-lb/in <sup>2</sup> @Temperature 73.4 °F	ISO 180/1A
Charpy Impact Unnotched	5.00 J/cm <sup>2</sup> @Temperature 23.0 °C	23.8 ft-lb/in <sup>2</sup> @Temperature 73.4 °F	ISO 179/1eU
Charpy Impact, Notched	0.300 J/cm <sup>2</sup> @Temperature 23.0 °C	1.43 ft-lb/in <sup>2</sup> @Temperature 73.4 °F	ISO 179/1eA
	0.400 J/cm <sup>2</sup> @Temperature -30.0 °C	1.90 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	ISO 179/1eA
Tensile Creep Modulus, 1 hour	1500 MPa	218000 psi	1h; ISO 899-1
Tensile Creep Modulus, 1000 hours	800 MPa	116000 psi	1000h; ISO 899-1
Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	100 μm/m-°C	55.6 μin/in-°F	ISO 11359-1/-2
	90.0 μm/m-°C @Temperature -40.0 - 23.0 °C	50.0 μin/in-°F @Temperature -40.0 - 73.4 °F	ISO 11359-1/-2
CTE, linear, Transverse to Flow	100 μm/m-°C	55.6 μin/in-°F	ISO 11359-1/-2
	90.0 μm/m-°C @Temperature -40.0 - 23.0 °C	50.0 μin/in-°F @Temperature -40.0 - 73.4 °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)	160 °C	320 °F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	94.0 °C	201 °F	ISO 75-1/-2
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
Flame Spread	37.0 mm/min @Thickness 1.00 mm	1.46 in/min @Thickness 0.0394 in	ISO 3795 (FMVSS 302)

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
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
FMVSS Class	B		ISO 3795 (FMVSS 302)
Max. screw tangential speed (m/s)	0.3		Injection
Part Marking Code	>POM-SD20<		ISO 11469
Polymer	POM-Z20		
Processing Hold Pressure Time (s/mm)	8		Injection
Resin Identification	POM-SD20		ISO 1043