



Delrin® 500T BK602

ACETAL RESIN

Common features of Delrin® acetal resins include mechanical and physical properties such as high mechanical strength and rigidity, excellent fatigue and impact resistance, as well as resistance to moisture, gasoline, lubricants, solvents, and many other neutral chemicals. Delrin® acetal resins also have excellent dimensional stability and good electrical insulating characteristics. They are naturally resilient, self-lubricating, and available in a variety of colors and speciality grades.

Delrin® acetal resin typically is used in demanding applications in the automotive, domestic appliances, sports, industrial engineering, electronics, and consumer goods industries.

Delrin® 500T is a toughened, medium viscosity acetal homopolymer resin for injection moulding with impact resistance similar to Delrin® 100. It can be used in parts requiring noise reduction.

Product information

Resin Identification	POM-I	ISO 1043
Part Marking Code	>POM-I<	ISO 11469

Rheological properties

Melt mass-flow rate	12 g/10min	ISO 1133
Melt mass-flow rate, Temperature	190 °C	ISO 1133
Melt mass-flow rate, Load	2.16 kg	ISO 1133
Moulding shrinkage, parallel	1.5 %	ISO 294-4, 2577
Moulding shrinkage, normal	1.6 %	ISO 294-4, 2577

Typical mechanical properties

Tensile Modulus	2300 MPa	ISO 527-1/-2
Yield stress	55 MPa	ISO 527-1/-2
Yield strain	17 %	ISO 527-1/-2
Nominal strain at break	30 %	ISO 527-1/-2
Flexural Modulus	2100 MPa	ISO 178
Flexural Stress at 3.5%	60 MPa	ISO 178
Charpy notched impact strength, 23°C	12 kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	8 kJ/m²	ISO 179/1eA
Izod notched impact strength, 23°C	12 kJ/m²	ISO 180/1A
Izod notched impact strength, -30°C	9 kJ/m²	ISO 180/1A
Izod notched impact strength, -40°C	9 kJ/m²	ISO 180/1A
Poisson's ratio	0.39	

Thermal properties

Melting temperature, 10°C/min	178 °C	ISO 11357-1/-3
Temp. of deflection under load, 1.8 MPa	80 °C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	145 °C	ISO 75-1/-2
RTI, electrical, 0.75mm	105 °C	UL 746B
RTI, electrical, 1.5mm	105 °C	UL 746B



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RTI, electrical, 3mm	105 °C	UL 746B
RTI, impact, 0.75mm	85 °C	UL 746B
RTI, impact, 1.5mm	85 °C	UL 746B
RTI, impact, 3mm	85 °C	UL 746B
RTI, strength, 0.75mm	85 °C	UL 746B
RTI, strength, 1.5mm	85 °C	UL 746B
RTI, strength, 3mm	85 °C	UL 746B

Flammability

Burning Behav. at 1.5mm nom. thickn.	HB class	IEC 60695-11-10
Thickness tested	1.5 mm	IEC 60695-11-10
UL recognition	yes	UL 94
Burning Behav. at thickness h	HB class	IEC 60695-11-10
Thickness tested	0.75 mm	IEC 60695-11-10
UL recognition	yes	UL 94
FMVSS Class	B	ISO 3795 (FMVSS 302)
Burning rate, Thickness 1 mm	56 mm/min	ISO 3795 (FMVSS 302)

Other properties

Density	1390 kg/m³	ISO 1183
Density of melt	1190 kg/m³	

Injection

Drying Recommended	yes
Drying Temperature	80 °C
Drying Time, Dehumidified Dryer	4 - 8 h
Processing Moisture Content	≤0.05 %
Melt Temperature Optimum	205 °C
Min. melt temperature	200 °C
Max. melt temperature	210 °C
Mold Temperature Optimum	50 °C
Min. mould temperature	40 °C
Max. mould temperature	60 °C
Hold pressure range	60 - 80 MPa
Hold pressure time	7.5 s/mm
Annealing time, optional	30 min/mm
Annealing temperature	160 °C



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Characteristics

Additives

Release agent