

DuPont™ Delrin® 100ST BK602

ACETAL RESIN

Product Information

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® 100ST is a super-toughened, high viscosity acetal homopolymer grade with superior impact resistance. It is designed for highly stressed parts where outstanding toughness is essential.

Product information	Value	Unit	Test Standard
Resin Identification	POM-HI	-	ISO 1043
Part Marking Code	POM-HI	-	ISO 11469
Rheological properties	Value	Unit	Test Standard
Melt volume-flow rate	1.8	cm ³ /10min	ISO 1133
Temperature	190	°C	ISO 1133
Load	2.16	kg	ISO 1133
Melt mass-flow rate	2.1	g/10min	ISO 1133
Melt mass-flow rate, Temperature	190	°C	ISO 1133
Melt mass-flow rate, Load	2.16	kg	ISO 1133
Molding shrinkage, parallel	0.8	%	ISO 294-4, 2577
Molding shrinkage, normal	1.1	%	ISO 294-4, 2577
Mechanical properties	Value	Unit	Test Standard
Tensile Modulus	1400	MPa	ISO 527-1/-2
Yield stress	40	MPa	ISO 527-1/-2
Yield strain	30	%	ISO 527-1/-2
Nominal strain at break	>50	%	ISO 527-1/-2
Flexural Modulus	1100	MPa	ISO 178
Charpy notched impact strength			ISO 179/1eA
73 °F	80	kJ/m ²	
-22 °F	14	kJ/m ²	
Thermal properties	Value	Unit	Test Standard
Melting temperature, 18 °F/min	178	°C	ISO 11357-1/-3
Temp. of deflection under load			ISO 75-1/-2
260 psi	60	°C	
65 psi	102	°C	
Coeff. of linear therm. expansion, parallel	120	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	120	E-6/K	ISO 11359-1/-2
RTI, electrical			UL 746B
60mil	105	°C	
120mil	105	°C	
RTI, impact			UL 746B
60mil	85	°C	
120mil	85	°C	
RTI, strength			UL 746B
60mil	85	°C	
120mil	85	°C	
Flammability	Value	Unit	Test Standard
Burning Behav. at 60mil nom. thickn.	HB	class	IEC 60695-11-10
Thickness tested	1.5	mm	IEC 60695-11-10
UL recognition	yes	-	UL 94
FMVSS Class	B	-	ISO 3795 (FMVSS 302)
Burning rate, Thickness 1 mm	<80	mm/min	ISO 3795 (FMVSS 302)
Other properties	Value	Unit	Test Standard
Density	1330	kg/m ³	ISO 1183

To find out more, visit [DuPont Performance Polymers](#) or contact nearest DuPont location.

North America

Tel: +1 302 999-4592

Toll-Free (USA): 800 441-0575

Asia Pacific

Tel: +81 3 5521 8600

Europe/Middle East/Africa

Tel: +41 22 717 51 11



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VDA Properties	Value	Unit	Test Standard
Emissions	<8 ⁽¹⁾	mg/kg	VDA 275
1: <5			
Injection	Value	Unit	Test Standard
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. mold temperature	40	°C	-
Max. mold 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	-
Extrusion	Value	Unit	Test Standard
Drying Temperature	75 - 85	°C	-
Drying Time, Dehumidified Dryer	2 - 4	h	-
Processing Moisture Content	≤0.05	%	-
Melt Temperature Optimum	200	°C	-
Melt Temperature Range	195 - 205	°C	-

Characteristics			
Processing	<ul style="list-style-type: none"> • Injection Molding • Profile Extrusion 	<ul style="list-style-type: none"> • Sheet Extrusion • Other Extrusion 	
Delivery form	<ul style="list-style-type: none"> • Pellets 		
Additives	<ul style="list-style-type: none"> • Lubricants 	<ul style="list-style-type: none"> • Release agent 	
Regional Availability	<ul style="list-style-type: none"> • North America • Europe 	<ul style="list-style-type: none"> • Asia Pacific • South and Central America 	<ul style="list-style-type: none"> • Near East/Africa • Global

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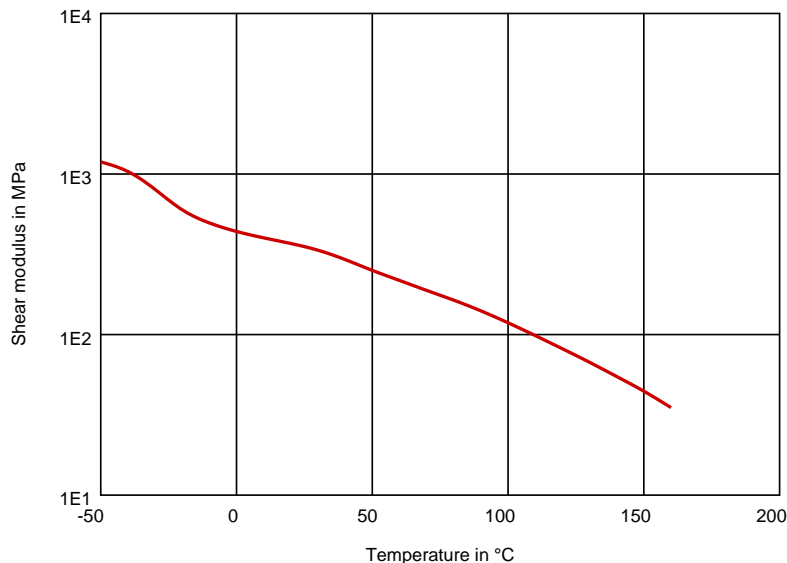
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Diagrams

Dynamic Shear modulus-temperature



Contact DuPont for Material Safety Data Sheet, general guides and/or additional information about ventilation, handling, purging, drying, etc. ISO Mechanical properties measured at 160 mil (Hytrel® measured at 80 mil), IEC Electrical properties measured at 80 mil, all ASTM properties measured at 120 mil, and test temperatures are 73°F unless otherwise stated.

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