



Delrin® SC698 NC010 (PRELIMINARY)

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® SC698 NC010 is a lubricated low viscosity acetal homopolymer, developed for high precision thin-walled parts requiring low wear and low friction with excellent surface aspect.

SPECIAL CONTROL for HEALTHCARE APPLICATIONS

This product is manufactured according to Good Manufacturing Practice (GMP) principles and generally accepted in food contact applications in Europe and the USA when meeting applicable use conditions. This product is also tested against ISO 10993-5 and -11 and selected parts of USP Class VI. For details, individual compliance statements are available from your DuPont representative.

Product information

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

Rheological properties

Melt mass-flow rate	23 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	1.6 %	ISO 294-4, 2577
Moulding shrinkage, normal	1.8 %	ISO 294-4, 2577

Typical mechanical properties

Tensile Modulus	3100 MPa	ISO 527-1/-2
Yield stress	65 MPa	ISO 527-1/-2
Yield strain	11 %	ISO 527-1/-2
Nominal strain at break	14 %	ISO 527-1/-2
Flexural Modulus	3000 MPa	ISO 178
Charpy impact strength, 23°C	90 kJ/m ²	ISO 179/1eU
Charpy impact strength, -30°C	85 kJ/m ²	ISO 179/1eU
Charpy notched impact strength, 23°C	4 kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30°C	4 kJ/m ²	ISO 179/1eA
Poisson's ratio	0.37 -	



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Thermal properties

Melting temperature, 10°C/min	178 °C	ISO 11357-1/-3
Temp. of deflection under load, 1.8 MPa	97 °C	ISO 75-1/-2
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
Thermal conductivity of melt	0.22 W/(m K)	
Spec. heat capacity of melt	3020 J/(kg K)	

Other properties

Density	1440 kg/m ³	ISO 1183
Density of melt	1140 kg/m ³	

VDA Properties

Emissions	<8 mg/kg	VDA 275
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Injection

Drying Recommended	yes
Drying Temperature	80 °C
Drying Time, Dehumidified Dryer	2 - 4 h
Processing Moisture Content	≤0.05 %
Melt Temperature Optimum	215 °C
Min. melt temperature	210 °C
Max. melt temperature	220 °C
Mold Temperature Optimum	90 °C
Min. mould temperature	80 °C
Max. mould temperature	100 °C
Hold pressure range	80 - 100 MPa
Hold pressure time	8 s/mm
Ejection temperature	105 °C
Annealing time, optional	30 min/mm
Annealing temperature	160 °C

Characteristics

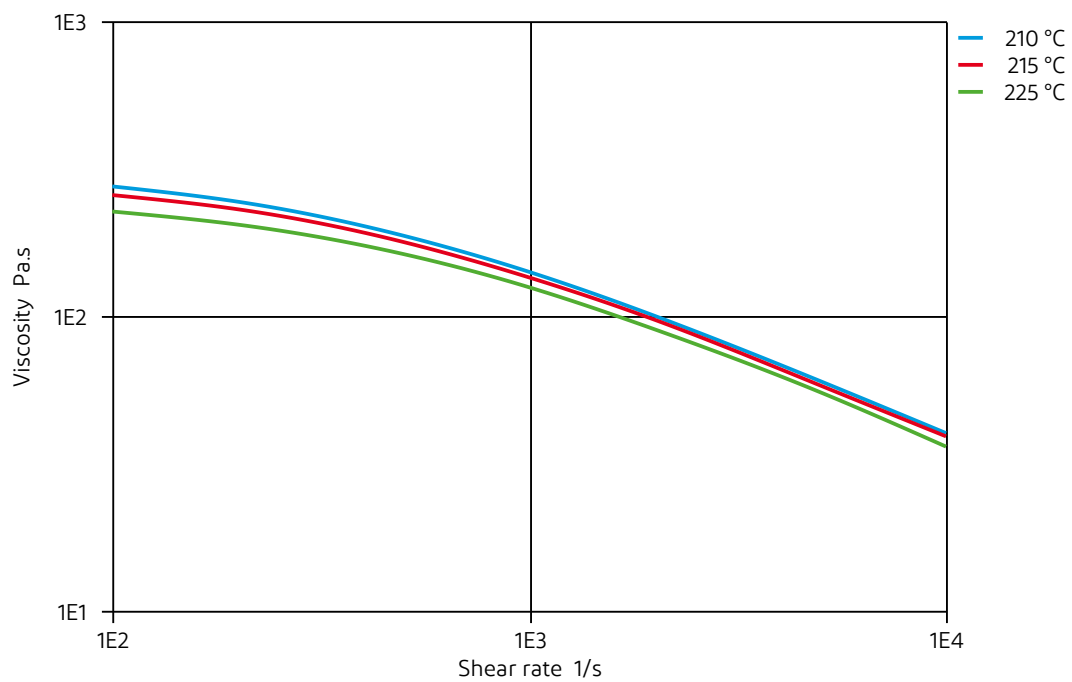
Additives	Release agent
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Viscosity-shear rate

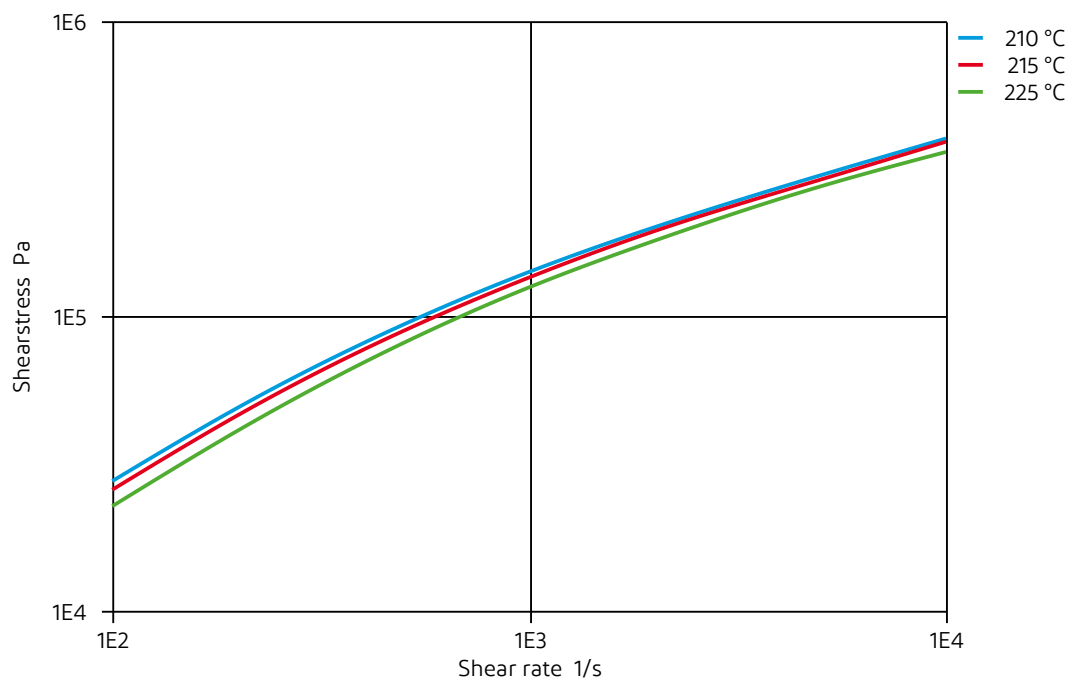




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Shearstress-shear rate

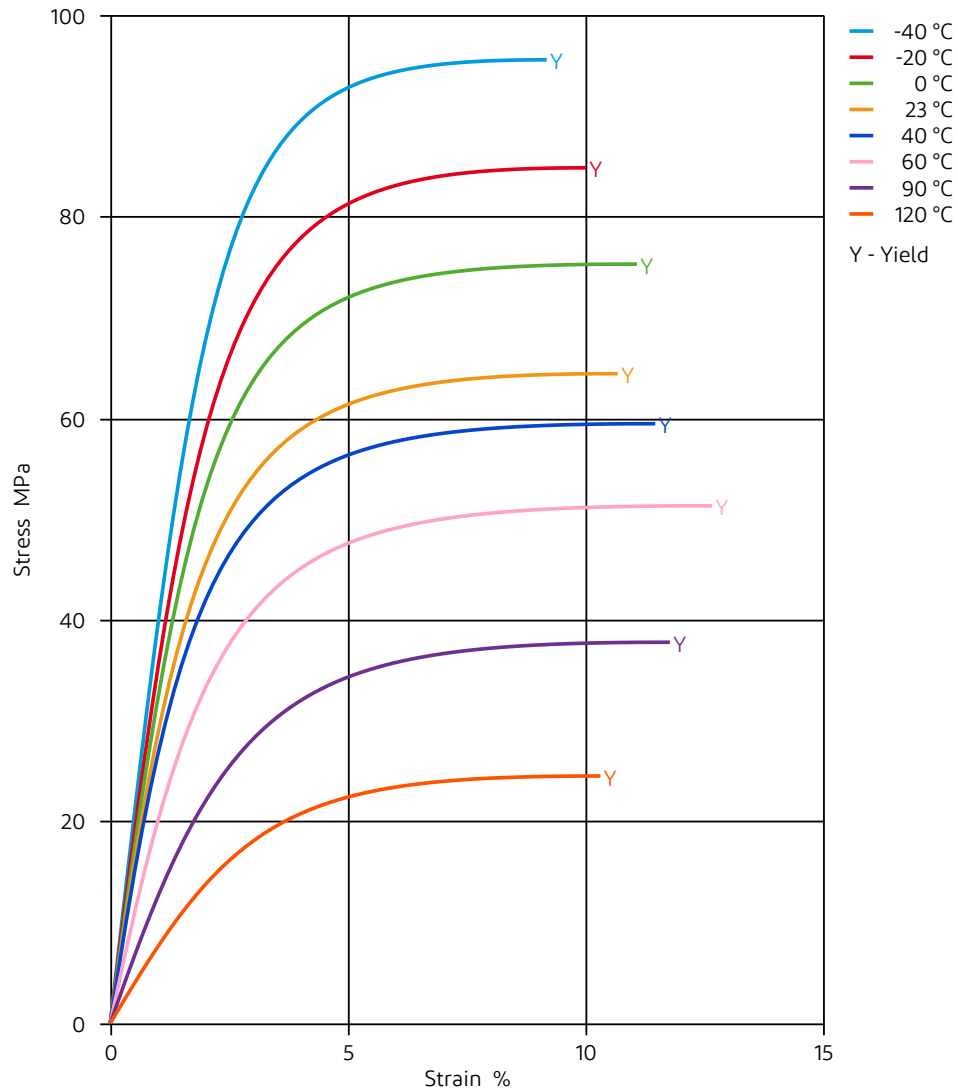




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Stress-strain

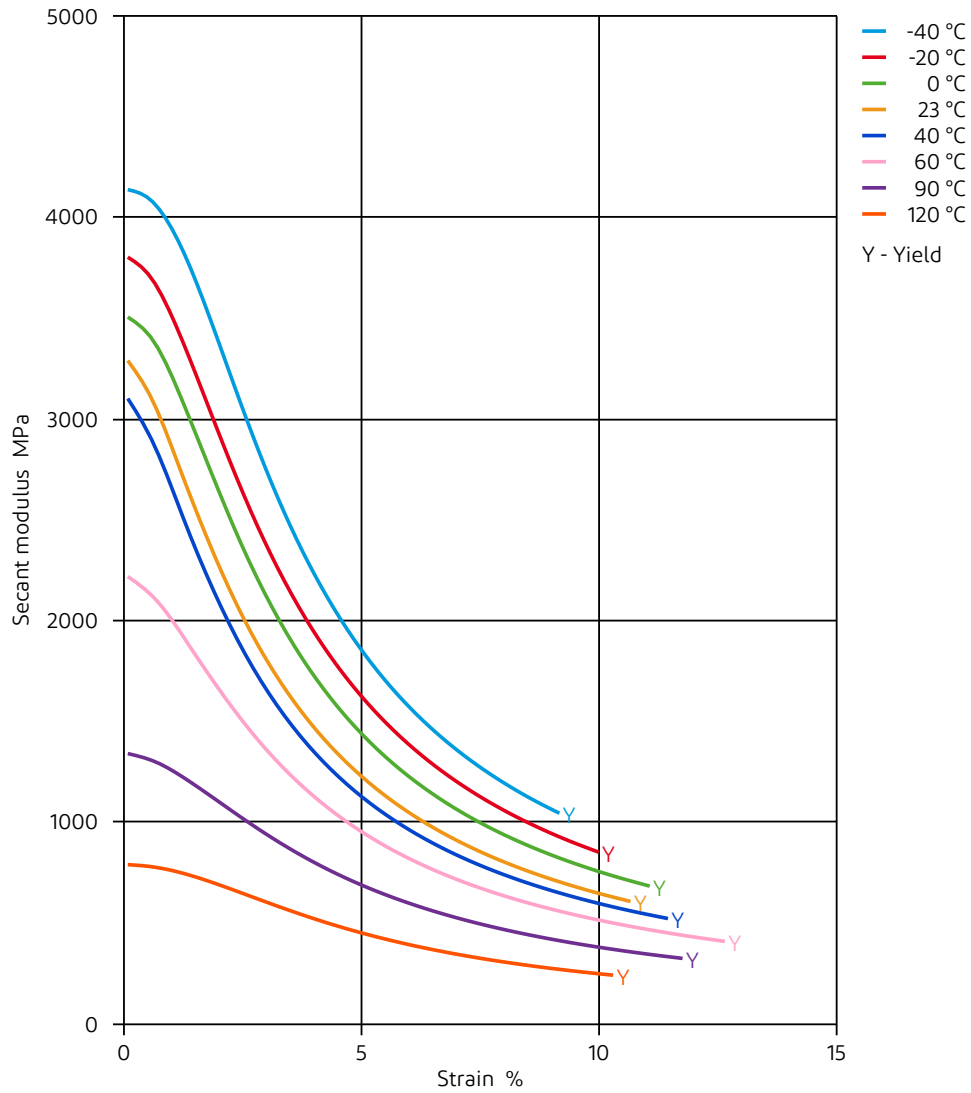




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Secant modulus-strain

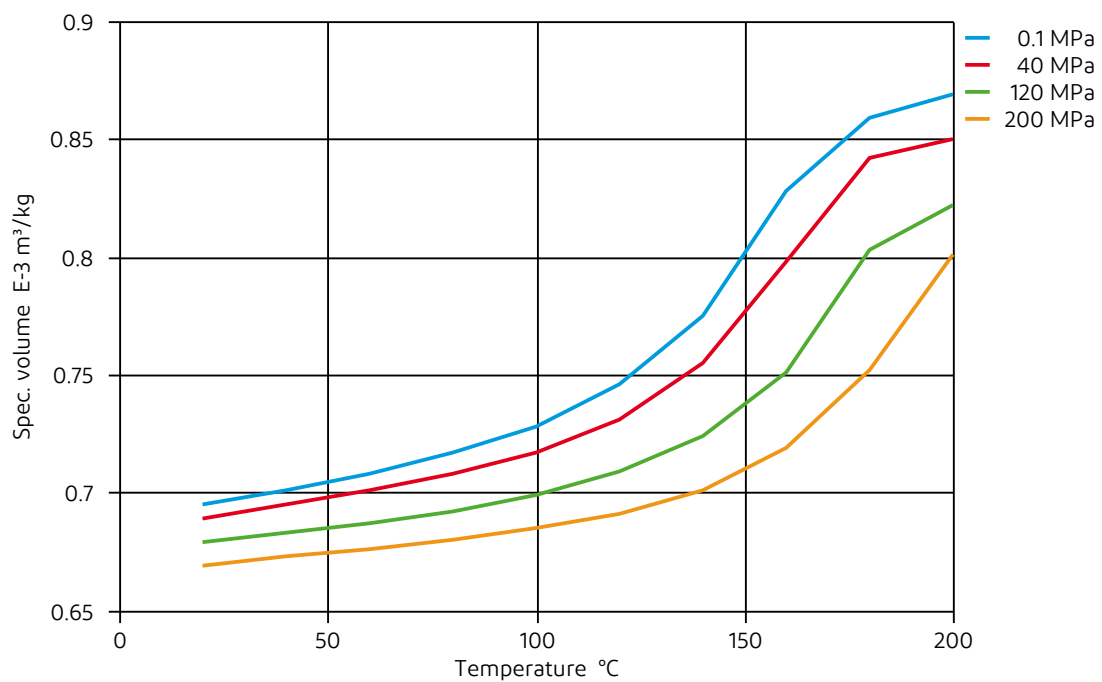




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Specific volume-temperature (pvT)

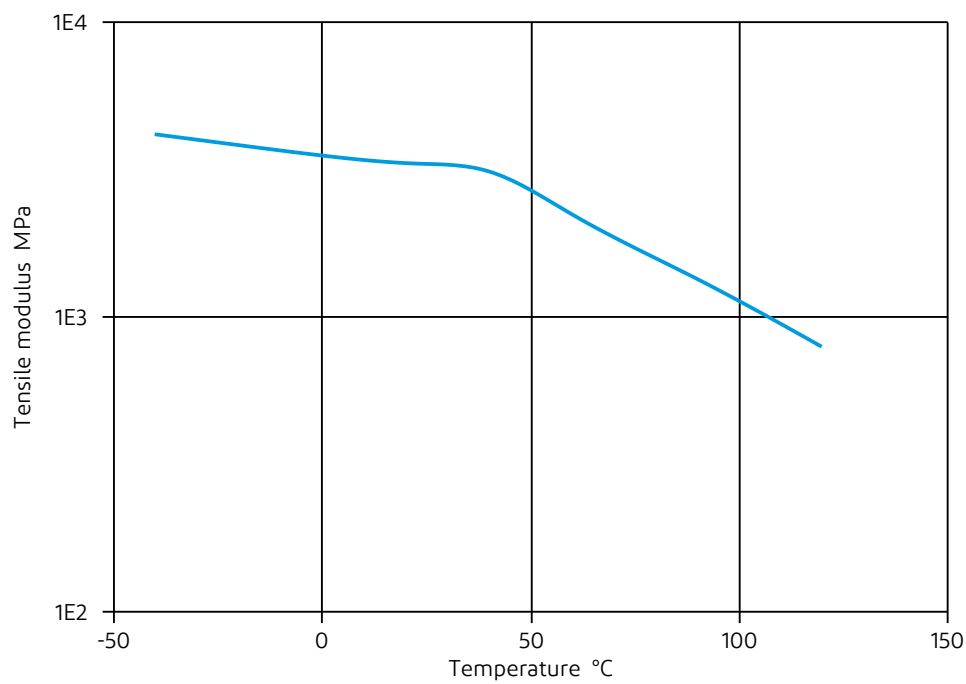




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Tensile modulus-temperature

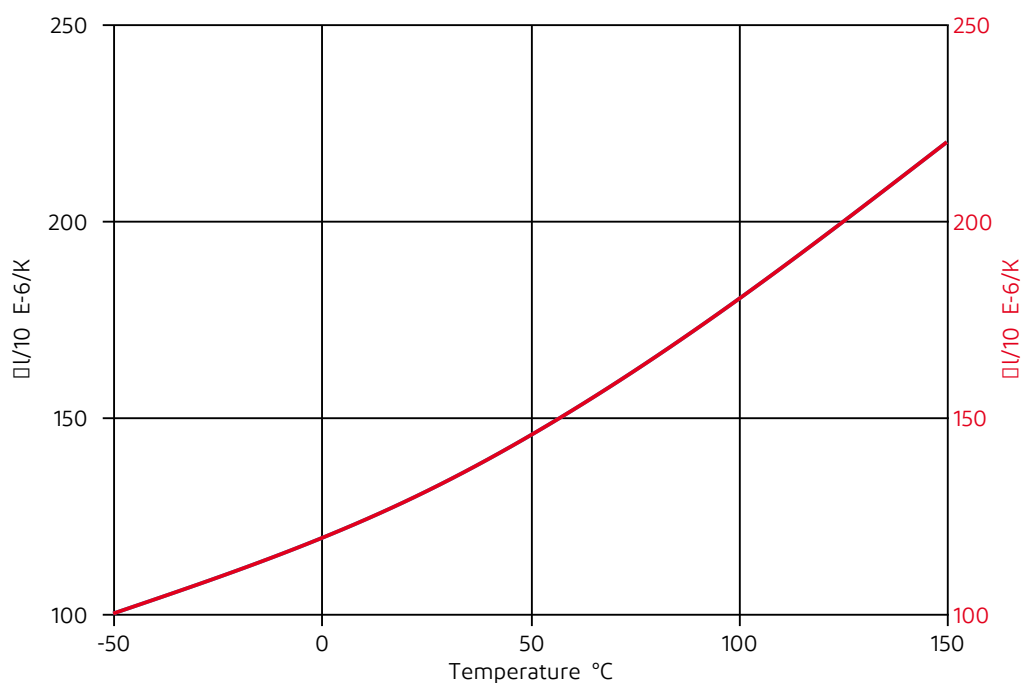




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Coeff. of linear thermal expansion



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The above data are preliminary and are subject to change as additional data are developed on subsequent lots.

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