Delrin® RASC698 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® RASC698 is a lubricated low viscosity acetal homopolymer, with reduced lifecycle greenhouse gas emissions and lower fossil resource use. It has been developed for high precision thin-walled parts requiring low wear and low friction with excellent surface aspect.

Delrin® Renewable Attributed base polymer is produced from 100% bio-feedstock from waste*. 100% certified renewable electricity is used for its production.
This approach helps customers in achieving their sustainability goals.

* according to ISCC Plus mass balance certification.

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 selected ISO 10993 parts including 10993-5 and -11 as well as USP class VI. For details, individual compliance statements are available from your Delrin representative.

Product information

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

Rheological properties

Melt mass-flow rate	21	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	20	%	ISO 527-1/-2
Flexural Modulus	3000	MPa	ISO 178
Charpy impact strength, 23°C	150	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	150	kJ/m²	ISO 179/1eU

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Charpy notched impact strength, 23°C	4	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	4	kJ/m²	ISO 179/1eA
Poisson's ratio	0.37		

Thermal properties

Melting temperature, 10°C/min	178[DS]	°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)	ISO 22007-2
Spec. heat capacity of melt	3020	J/(kg K)	

[DS]: Derived from similar grade

Other properties

Density	1440	kg/m³	ISO 1183
Density of melt	1140	kg/m³	

VDA Properties

Emissions	<8	mg/kg	VDA 275

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	110	°C
Annealing time, optional	30	min/mm
Annealing temperature	160	°C

Characteristics

Additives	Biobased

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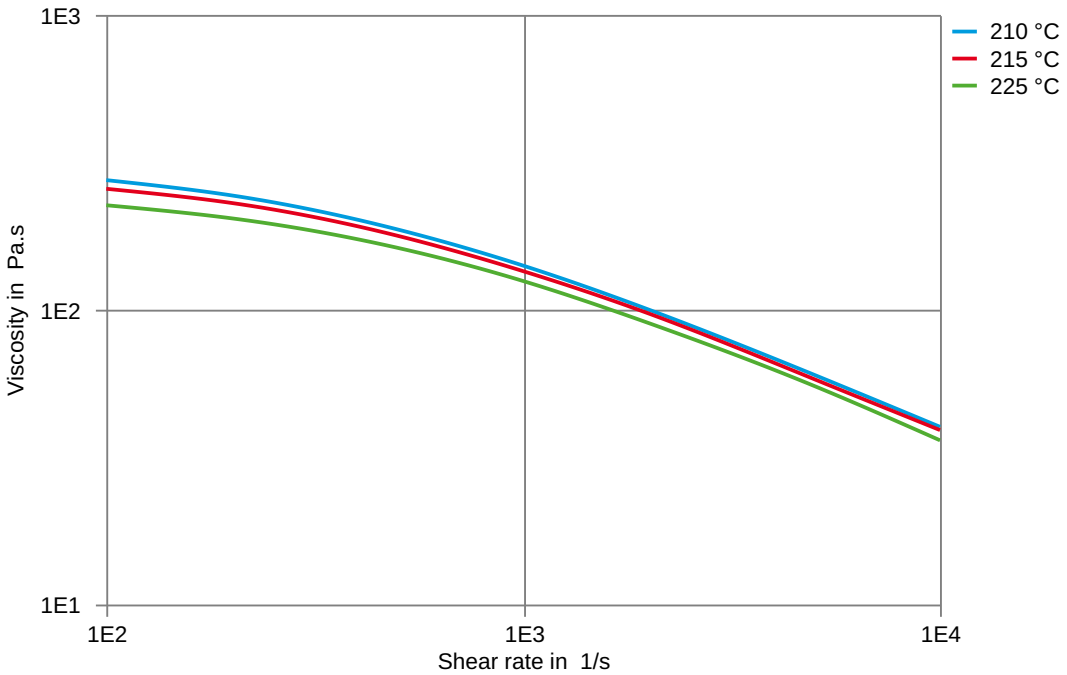
Viscosity-shear rate



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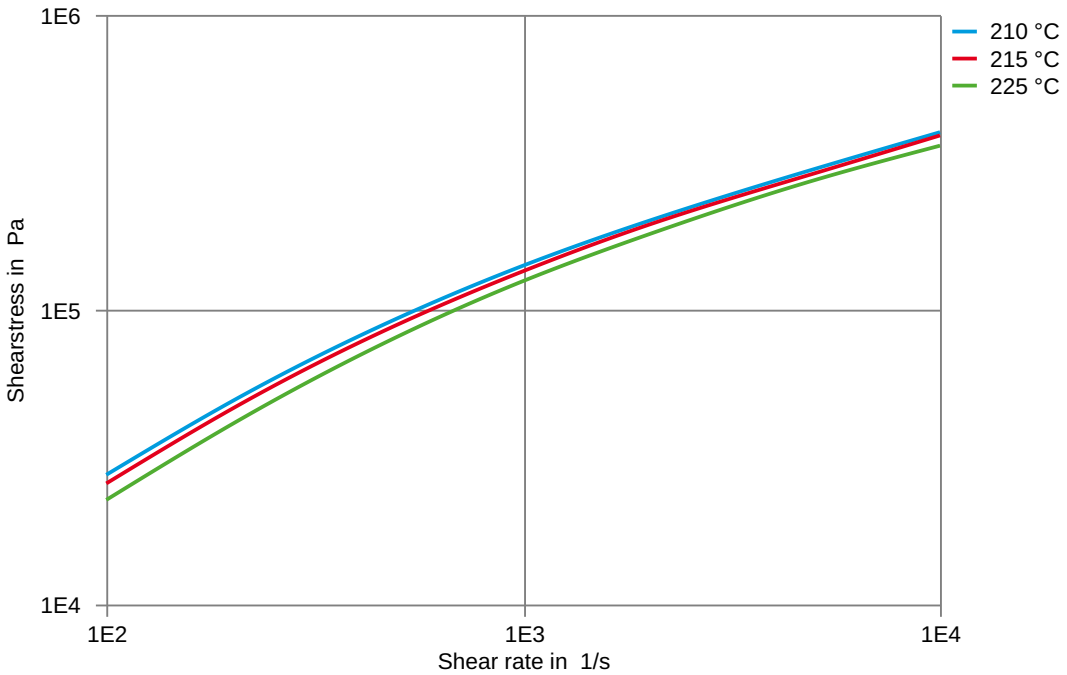
Shearstress-shear rate



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+852-6957-5415 (HongKong)

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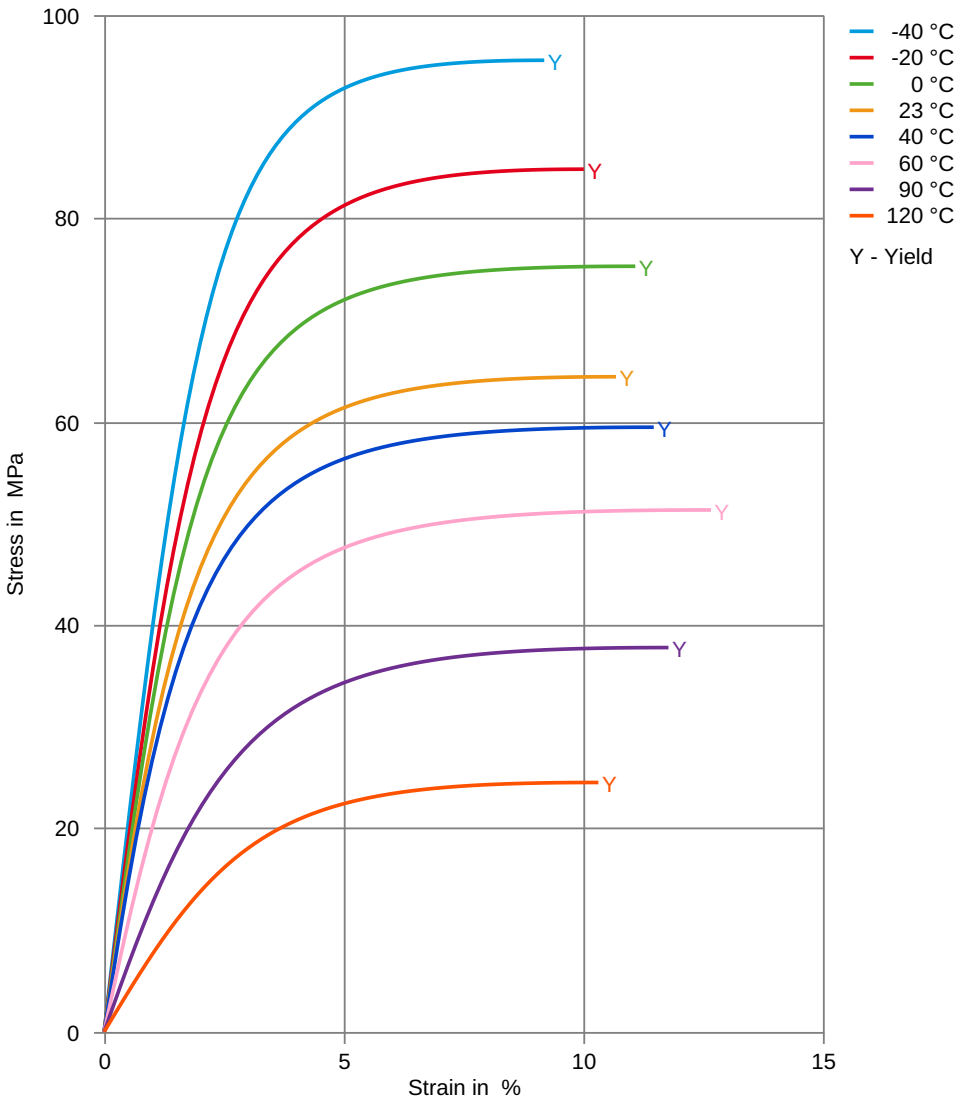
Stress-strain



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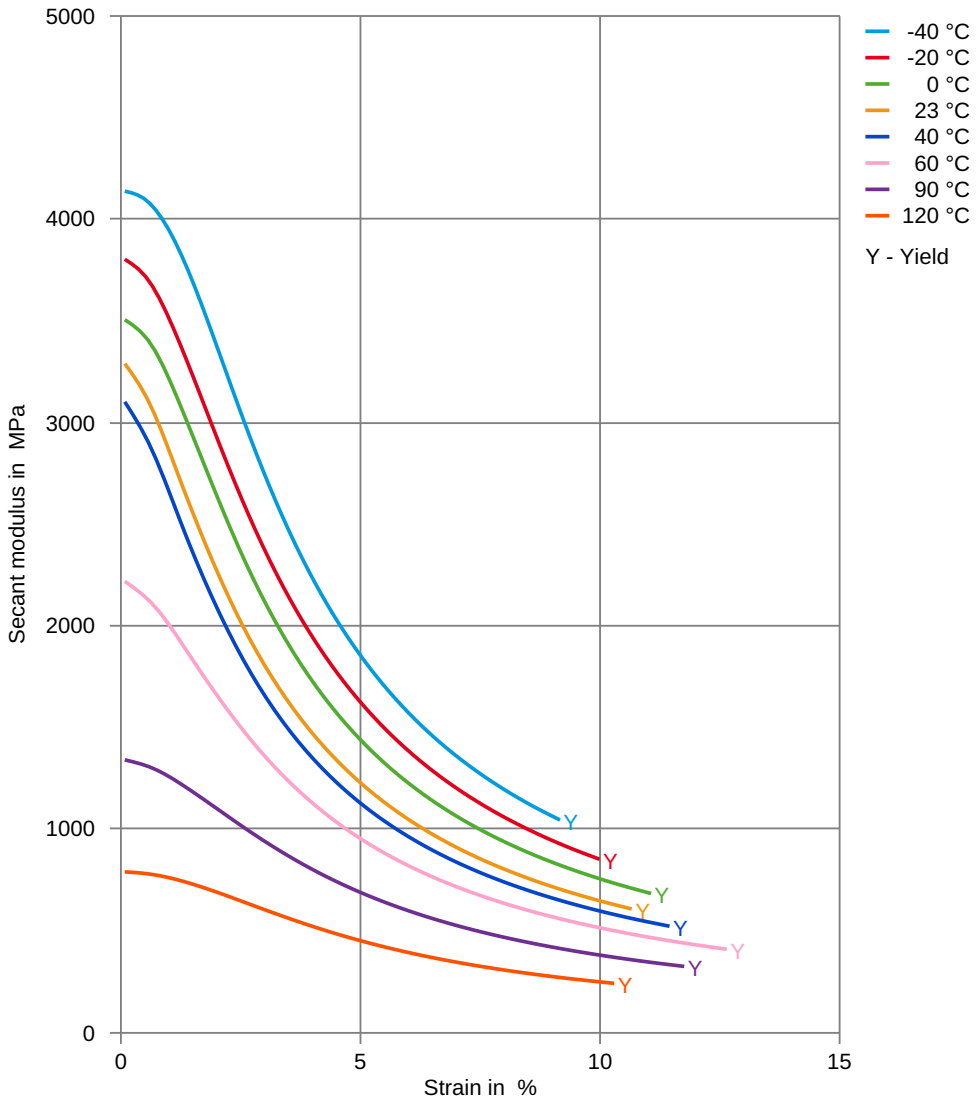
Secant modulus-strain



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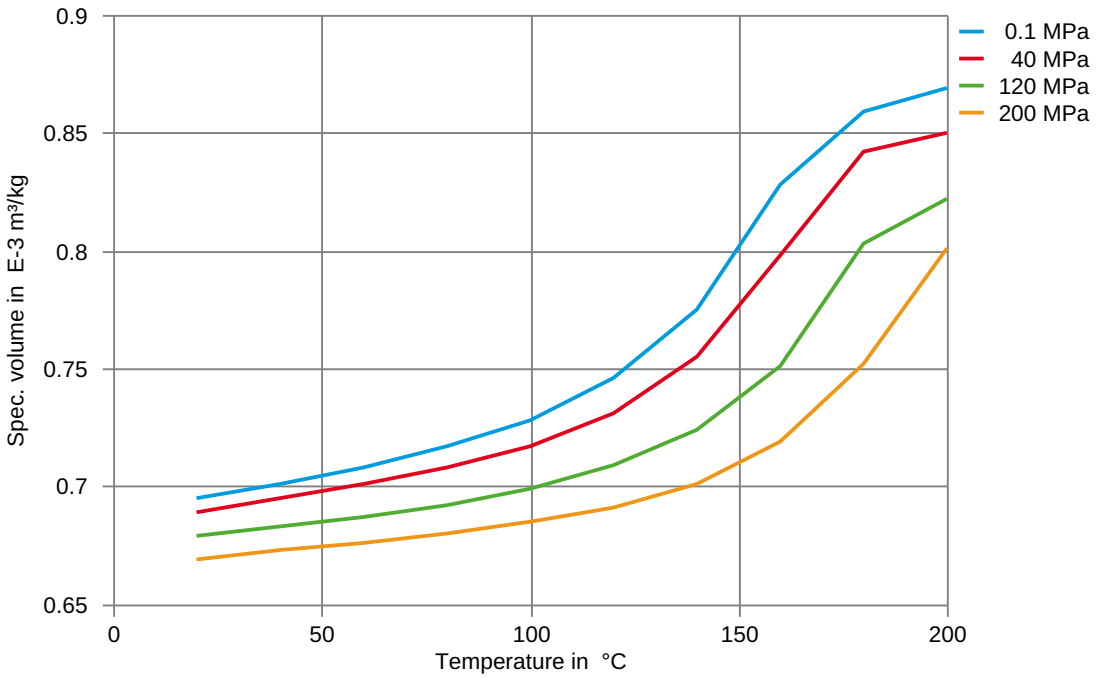
Specific volume-temperature (pvT)



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Tensile modulus-temperature