



Delrin® 100ALE NC010 (DEVELOPMENTAL)

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® 100ALE is a high viscosity acetal homopolymer with very low VOC emissions for applications in automotive interiors. It contains an advanced system of lubrication designed for low wear, low friction, and low noise against metals and plastics.

Product information

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

Rheological properties

Melt mass-flow rate	2.5 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	2.0 %	ISO 294-4, 2577
Moulding shrinkage, normal	1.7 %	ISO 294-4, 2577

Typical mechanical properties

Tensile Modulus	3000 MPa	ISO 527-1/-2
Yield stress	70 MPa	ISO 527-1/-2
Yield strain	18 %	ISO 527-1/-2
Nominal strain at break	40 %	ISO 527-1/-2
Charpy impact strength, 23°C	N kJ/m ²	ISO 179/1eU
Charpy impact strength, -30°C	200 kJ/m ²	ISO 179/1eU
Charpy notched impact strength, 23°C	10.5 kJ/m ²	ISO 179/1eA



The above data are for the developmental sample and are subject to change as the product is scaled up.

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Charpy notched impact strength, -30°C	8 kJ/m ²	ISO 179/1eA
Izod notched impact strength, 23°C	8 kJ/m ²	ISO 180/1A
Poisson's ratio	0.37 -	

Thermal properties

Melting temperature, 10°C/min	178 °C	ISO 11357-1/-3
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Flammability

FMVSS Class	B -	ISO 3795 (FMVSS 302)
Burning rate, Thickness 1 mm	<80 mm/min	ISO 3795 (FMVSS 302)

Other properties

Density	1400 kg/m ³	ISO 1183
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VDA Properties

Emissions	<2 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	≤0.2 %
Melt Temperature Optimum	205 °C
Min. melt temperature	200 °C
Max. melt temperature	210 °C
Max. screw tangential speed	0.2 m/s
Mold Temperature Optimum	90 °C
Min. mould temperature	80 °C
Max. mould temperature	100 °C
Hold pressure range	90 - 110 MPa
Hold pressure time	8 s/mm
Annealing time, optional	30 min/mm
Annealing temperature	160 °C

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Extrusion

Drying Temperature	75 - 85 °C
Drying Time, Dehumidified Dryer	2 - 4 h
Processing Moisture Content	≤0.2 %
Melt Temperature Optimum	200 °C
Melt Temperature Range	195 - 205 °C

Characteristics

Additives

Release agent



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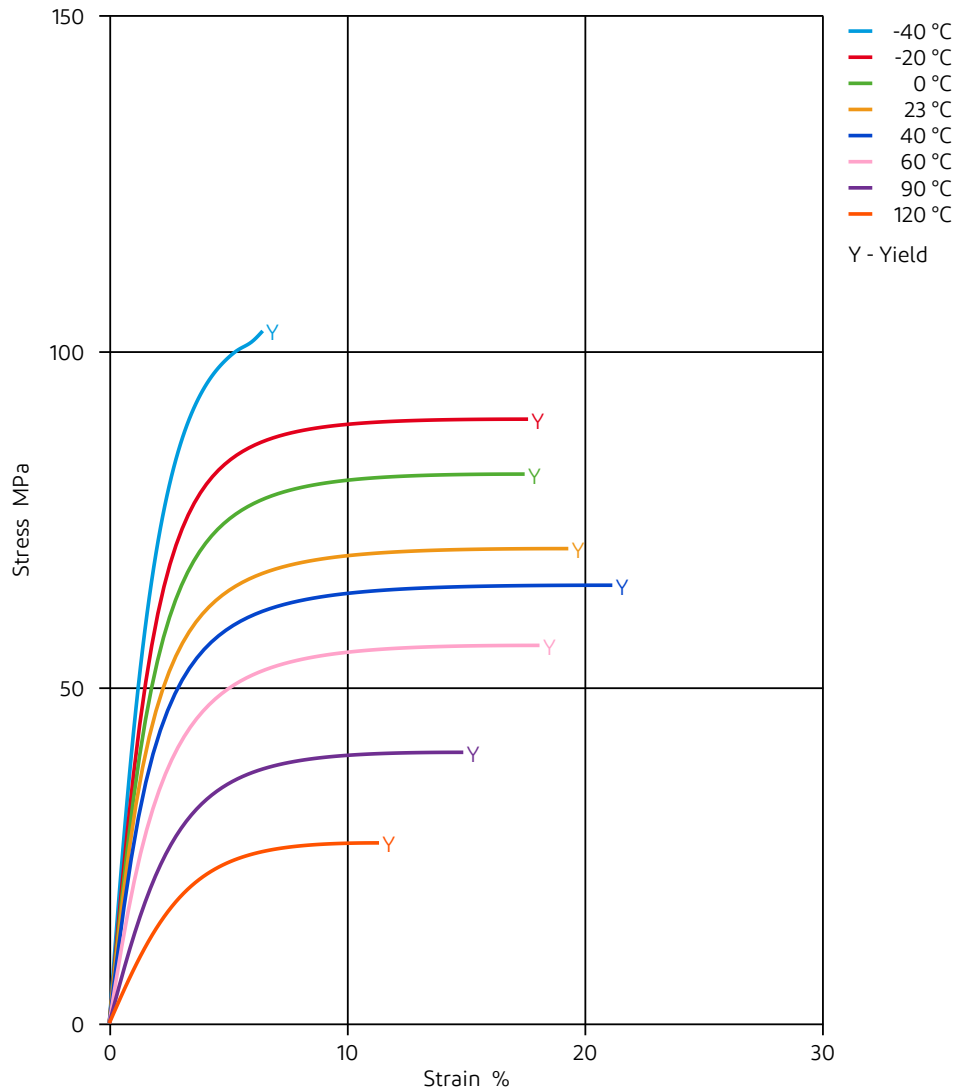
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Stress-strain



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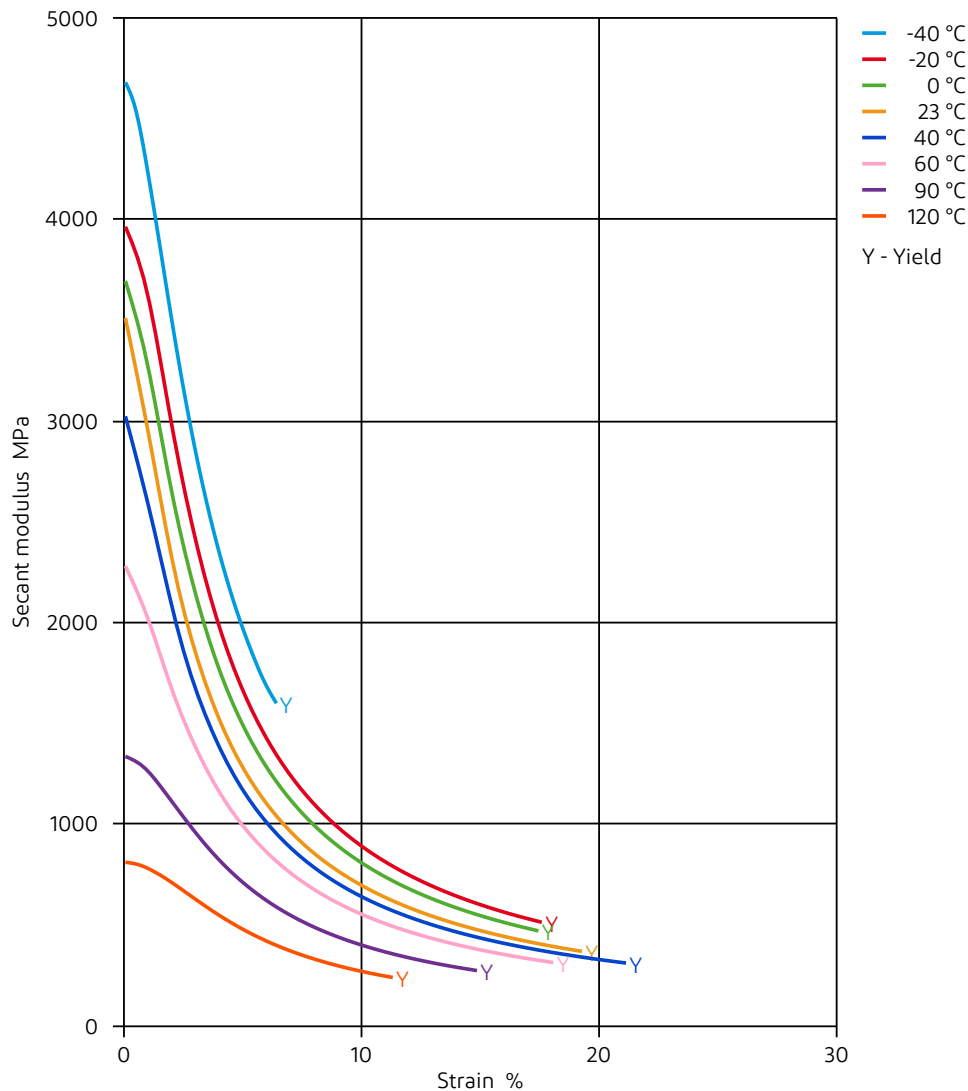
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Secant modulus-strain



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