

DuPont™ Delrin® 570 NC000

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® 570 is a medium viscosity acetal homopolymer containing 20% glass fiber filler for injection moulding. It has very high stiffness, low warpage, and good creep resistance for superior performance at elevated temperature.

General information	Value	Unit	Test Standard
Resin Identification	POM-GF20	-	ISO 1043
Part Marking Code	POM-GF20	-	ISO 11469
Rheological properties	Value	Unit	Test Standard
Melt volume-flow rate	7	cm ³ /10min	ISO 1133
Temperature	190	°C	ISO 1133
Load	2.16	kg	ISO 1133
Moulding shrinkage, parallel	1.8	%	ISO 294-4, 2577
Moulding shrinkage, normal	1.2	%	ISO 294-4, 2577
Mechanical properties	Value	Unit	Test Standard
Tensile Modulus	4900	MPa	ISO 527-1/-2
Stress at break	53	MPa	ISO 527-1/-2
Strain at break	12	%	ISO 527-1/-2
Flexural Modulus	4600	MPa	ISO 178
Charpy impact strength			ISO 179/1eU
23°C	54	kJ/m ²	
-30°C	50	kJ/m ²	
Charpy notched impact strength			ISO 179/1eA
23°C	3.5	kJ/m ²	
-30°C	3	kJ/m ²	
Izod notched impact strength, 23°C	6	kJ/m ²	ISO 180/1A
Ball indentation hardness, H 961/30	160	MPa	ISO 2039-1
Thermal properties	Value	Unit	Test Standard
Melting temperature, 10°C/min	178	°C	ISO 11357-1/-3
Temp. of deflection under load			ISO 75-1/-2
1.8 MPa	125	°C	
0.45 MPa	165	°C	
Vicat softening temperature, 50°C/h, 50N	160	°C	ISO 306
Coeff. of linear therm. expansion, parallel	60	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	85	E-6/K	ISO 11359-1/-2
RTI, electrical			UL 746B
1.5mm	105	°C	
3mm	105	°C	
6mm	105	°C	
RTI, impact			UL 746B
1.5mm	85	°C	
3mm	85	°C	
6mm	85	°C	
RTI, strength			UL 746B
1.5mm	90	°C	
3mm	90	°C	
6mm	90	°C	
Flammability	Value	Unit	Test Standard
Burning Behav. at 1.5mm nom. thckn.	HB	class	IEC 60695-11-10
Thickness tested	1.5	mm	IEC 60695-11-10

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

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UL recognition	yes	-	UL 94
Burning Behav. at thickness h	HB	class	IEC 60695-11-10
Thickness tested	3	mm	IEC 60695-11-10
UL recognition	yes	-	UL 94
Glow Wire Flammability Index, 3mm	600	°C	IEC 60695-2-12
FMVSS Class	B	-	ISO 3795 (FMVSS 302)
Burning rate, Thickness 1 mm	53	mm/min	ISO 3795 (FMVSS 302)
Electrical properties	Value	Unit	Test Standard
Relative permittivity			IEC 62631-2-1
100Hz	3.9	-	
1MHz	3.9	-	
Dissipation factor, 1MHz	50	E-4	IEC 62631-2-1
Volume resistivity	1E13	Ohm*m	IEC 62631-3-1
Surface resistivity	>1E15	Ohm	IEC 62631-3-2
Comparative tracking index	600	-	IEC 60112
Other properties	Value	Unit	Test Standard
Humidity absorption, 2mm	0.1	%	Sim. to ISO 62
Water absorption, 2mm	0.8	%	Sim. to ISO 62
Density	1560	kg/m ³	ISO 1183
VDA Properties	Value	Unit	Test Standard
Emissions	<8	mg/kg	VDA 275
Fogging, G-value (condensate)	0.5	mg	ISO 6452
Injection	Value	Unit	Test Standard
Drying Recommended	yes	-	-
Drying Temperature	≥80	°C	-
Drying Time, Dehumidified Dryer	2 - 4	h	-
Processing Moisture Content	≤0.2	%	-
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	-
Annealing time, optional	30	min/mm	-
Annealing temperature	160	°C	-

Characteristics

Processing	• Injection Moulding
Delivery form	• Pellets
Additives	• Release agent
Regional Availability	• North America • Europe • Asia Pacific • South and Central America • Near East/Africa • Global

Processing Texts

Injection molding

Drying is recommended, but not necessary for newly opened packaging stored in a dry location.

Follow the drying guidelines above in the following cases:

- If moisture is above the Processing Moisture Content recommendation,
- When a resin container is damaged,
- When the material is not properly stored in a dry place at room temperature, or
- When packaging stays open for a significant time.

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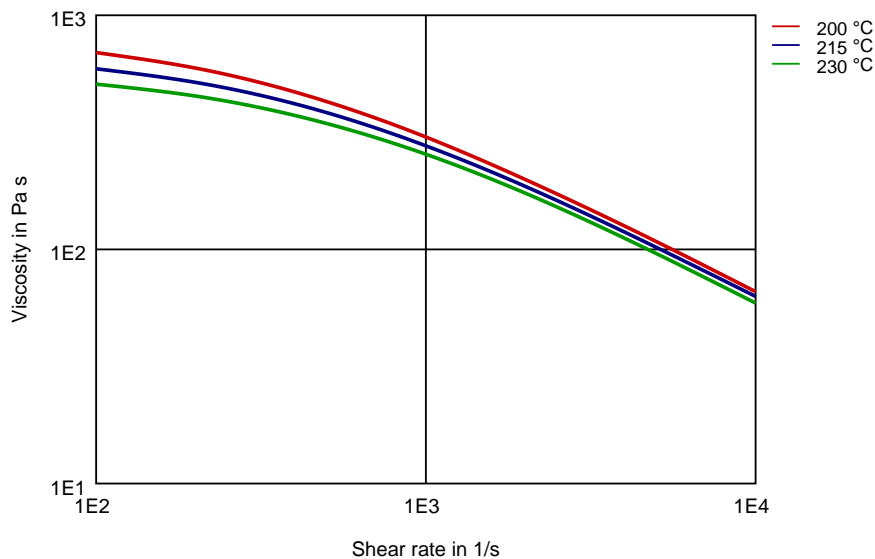


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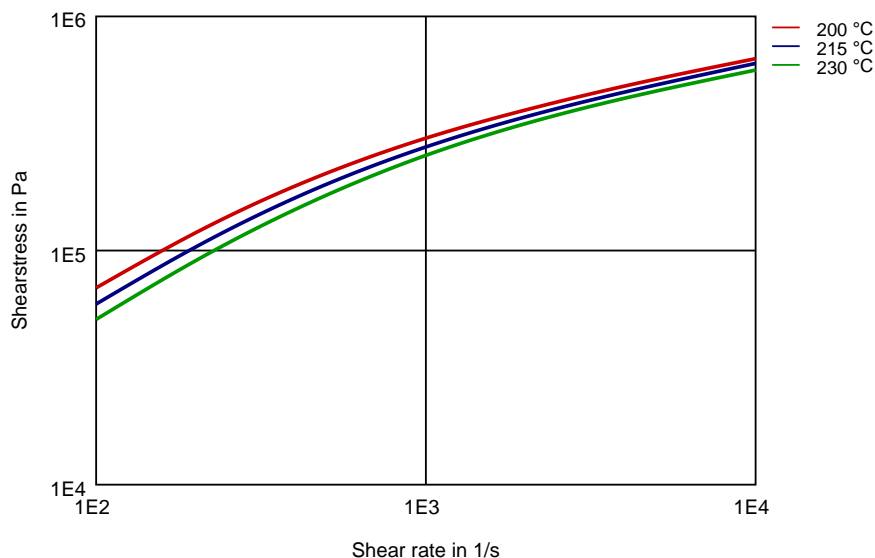
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Diagrams

Viscosity-shear rate



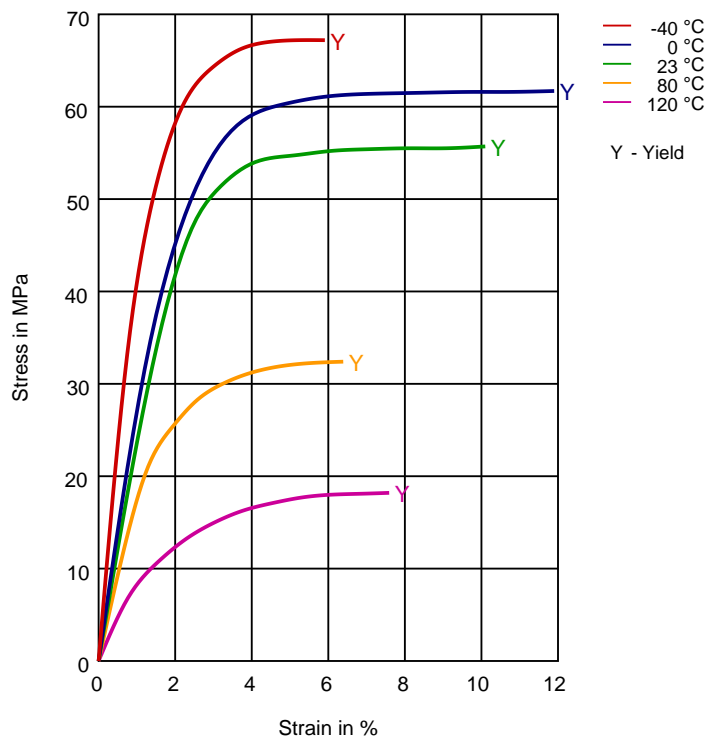
Shearstress-shear rate



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Stress-strain



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Page: 4 of 6

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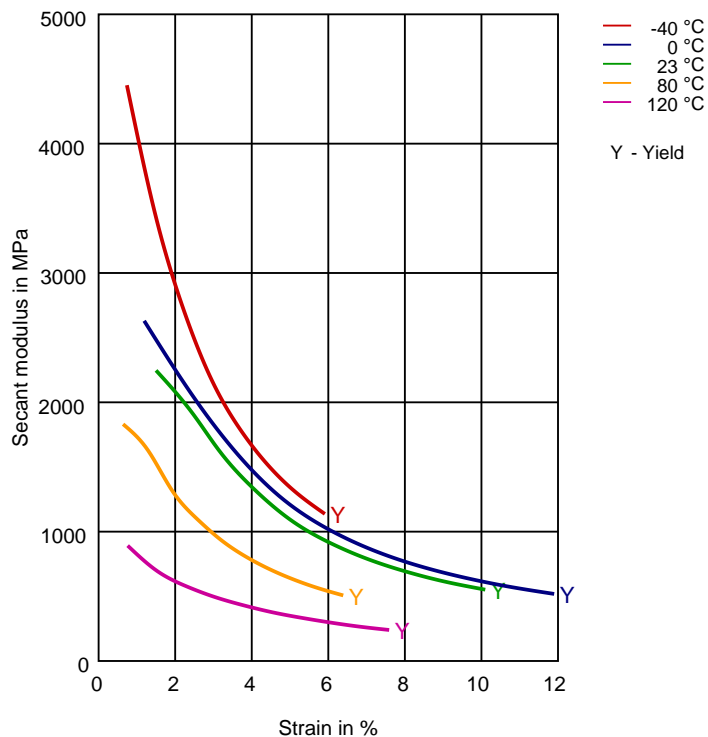
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Secant modulus-strain



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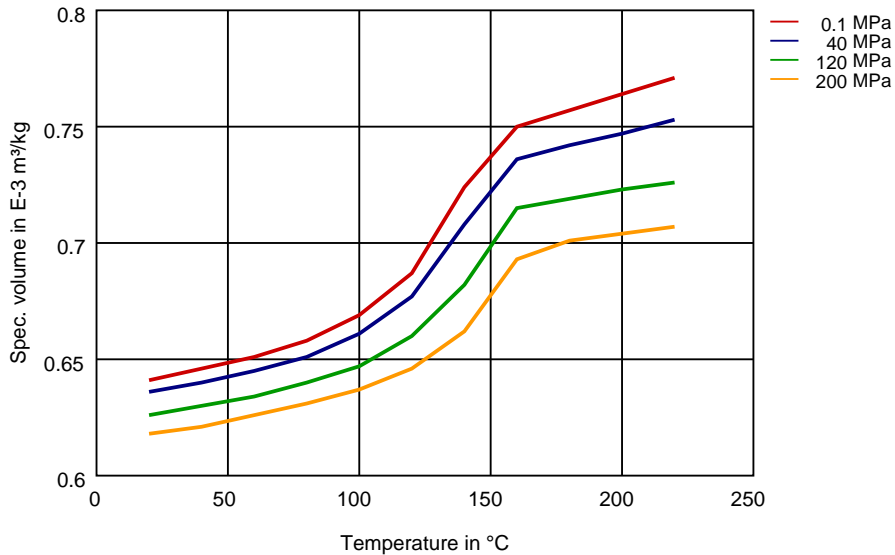
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Specific volume-temperature (pvT)



Contact DuPont for Material Safety Data Sheet, general guides and/or additional information about ventilation, handling, purging, drying, etc. ISO Mechanical properties measured at 4mm (Hytrel® measured at 2 mm), IEC Electrical properties measured at 2mm, all ASTM properties measured at 3.2mm, and test temperatures are 23°C unless otherwise stated.

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