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 molding. 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	cm³/10min	ISO 1133
Temperature	190	°C	ISO 1133
Load	2.16	kg	ISO 1133
Molding shrinkage, parallel	1.8	%	ISO 294-4, 2577
Molding 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
73°F	54	kJ/m²	
-22°F	50	kJ/m²	
Charpy notched impact strength			ISO 179/1eA
73°F	3.5	kJ/m²	
-22°F	3	kJ/m²	
Izod notched impact strength, 73°F	6	kJ/m²	ISO 180/1A
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	125	°C	
65 psi	165	°C	
Vicat softening temperature, 90°F/h, 11 lbf	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
60mil	105	°C	
120mil	105	°C	
240mil	105	°C	
RTI, impact			UL 746B
60mil	85	°C	
120mil	85	°C	
240mil	85	°C	
RTI, strength			UL 746B
60mil	90	°C	
120mil	90	°C	
240mil	90	°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

To find out more, visit DuPont Performance Polymers or contact nearest DuPont location.

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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, 120mil	600	°C	IEC 60695-2-1/2
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 60250
100Hz	3.9	-	
1MHz	3.9	-	
Dissipation factor, 1MHz	50	E-4	IEC 60250
Volume resistivity	1E13	Ohm*m	IEC 60093
Surface resistivity	>1E15	Ohm	IEC 60093
Comparative tracking index	600	-	IEC 60112
Other properties	**Value**	**Unit**	**Test Standard**
Humidity absorption, 80mil	0.1	%	Sim. to ISO 62
Water absorption, 80mil	0.8	%	Sim. to ISO 62
Density	1560	kg/m³	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. mold temperature	80	°C	-
Max. mold 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 Molding		
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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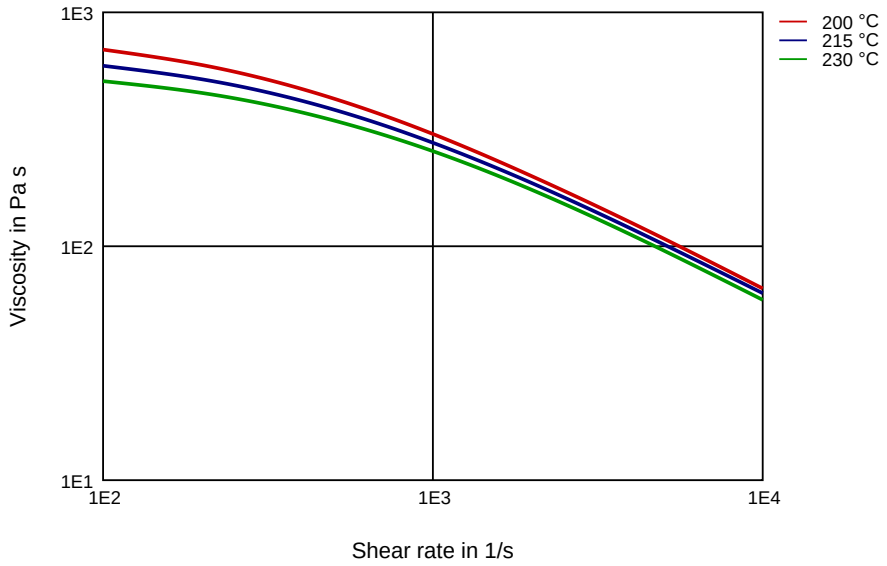
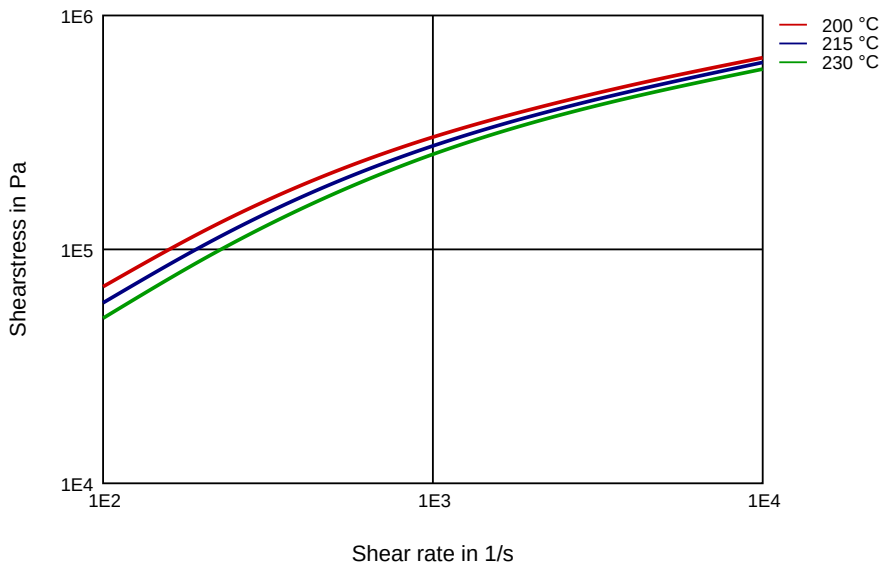
Diagrams

Viscosity-shear rate



Shearstress-shear rate



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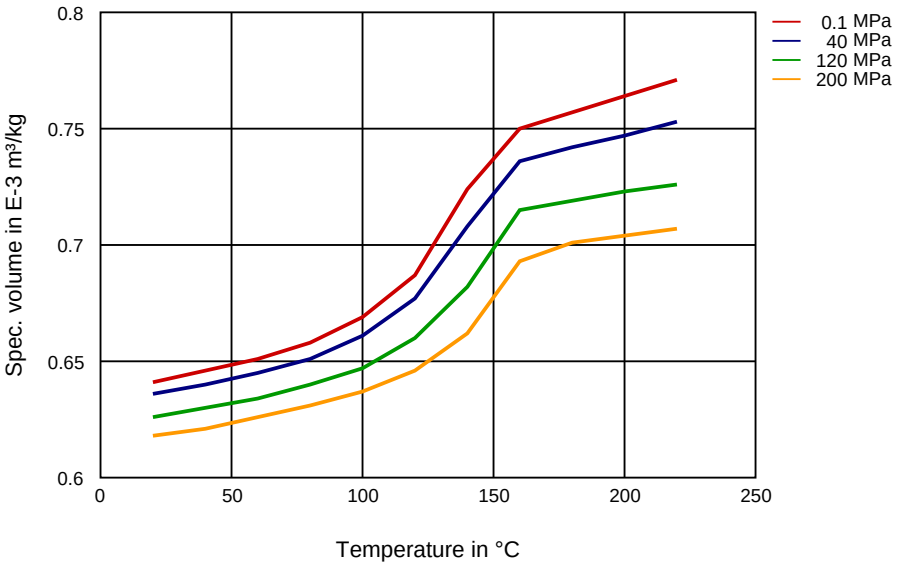
Specific volume-temperature (pvT)



Contact DuPont for Material Safety Data Sheet, general guides and/or additional information about ventilation, handling, purging, drying, etc. ISO Mechanical properties measured at 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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