

Product Texts

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.

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
^[C] Melt volume-flow rate, MVR	7	cm ³ /10min	ISO 1133
Temperature	190	°C	-
Load	2.16	kg	-
^[C] Molding shrinkage, parallel	1.8	%	ISO 294-4, 2577
^[C] Molding shrinkage, normal	1.2	%	ISO 294-4, 2577
ASTM Data			
Melt Flow Index, MFI	4	g/10min	ASTM D 1238

[C]: CAMPUS

Mechanical properties	Value	Unit	Test Standard
ISO Data			
^[C] Tensile Modulus	4900	MPa	ISO 527
^[C] Stress at break	53	MPa	ISO 527
^[C] Strain at break	12	%	ISO 527
^[C] Charpy impact strength, +23°C	54	kJ/m ²	ISO 179/1eU
^[C] Charpy impact strength, -30°C	50	kJ/m ²	ISO 179/1eU
^[C] Charpy notched impact strength, +23°C	3.5	kJ/m ²	ISO 179/1eA
^[C] Charpy notched impact strength, -30°C	3	kJ/m ²	ISO 179/1eA
ASTM Data			
Tensile Modulus	5920	MPa	ASTM D 638
Tensile Strength	59	MPa	ASTM D 638
Elongation at Break	12	%	ASTM D 638
Flexural Modulus	5000	MPa	ASTM D 790
Rockwell Hardness	R 118	-	ASTM D 785
Izod Impact notched, 1/8 in	34	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	27	J/m	ASTM D 256
Temperature	-40	°C	-

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Thermal properties	Value	Unit	Test Standard
ISO Data			
^[C] Melting temperature, 10°C/min	178	°C	ISO 11357-1/-3
^[C] Temp. of deflection under load, 1.80 MPa	125	°C	ISO 75-1/-2
^[C] Temp. of deflection under load, 0.45 MPa	165	°C	ISO 75-1/-2
^[C] Vicat softening temperature, B	160	°C	ISO 306
^[C] Coeff. of linear therm. expansion, parallel	60	E-6/K	ISO 11359-1/-2
^[C] Coeff. of linear therm. expansion, normal	85	E-6/K	ISO 11359-1/-2
^[C] Burning Behav. at 1.5 mm nom. thickn.	HB	class	IEC 60695-11-10
Thickness tested	1.5	mm	-
Yellow Card available	yes	-	-
^[C] Burning Behav. at thickness h	HB	class	IEC 60695-11-10
Thickness tested	3.0	mm	-
Yellow Card available	yes	-	-
ASTM Data			
UL 94 Flame rating	HB	-	UL 94
Thickness tested	1.5	mm	-
Coefficient of Thermal Expansion, MD	61	E-6/K	ASTM D 696
Coefficient of Thermal Expansion, TD	86	E-6/K	ASTM D 696
DTUL @ 66 psi	169	°C	ASTM D 648

Delrin® 570 NC000

POM-GF20

Delrin

DTUL @ 264 psi	144	°C	ASTM D 648
Melting Temperature	178	°C	ASTM D 3418

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Electrical properties	Value	Unit	Test Standard
ISO Data			
[C] Relative permittivity, 100Hz	3.9	-	IEC 62631-2-1
[C] Relative permittivity, 1MHz	3.9	-	IEC 62631-2-1
[C] Dissipation factor, 1MHz	50	E-4	IEC 62631-2-1
[C] Volume resistivity	1E13	Ohm*m	IEC 62631-3-1
[C] Surface resistivity	>1E15	Ohm	IEC 62631-3-2
[C] Comparative tracking index	600	-	IEC 60112
ASTM Data			
Dielectric Strength, Short Time	17.8	kV/mm	ASTM D 149
Dissipation Factor, 1 MHz	0.006	-	ASTM D 150
Dielectric Constant, 1 MHz	3.8	-	ASTM D 150
Surface Resistivity	>1E15	Ohm	ASTM D 257
Volume Resistivity	8E14	Ohm*cm	ASTM D 257

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Other properties	Value	Unit	Test Standard
[C] Water absorption	0.8	%	Sim. to ISO 62
[C] Humidity absorption	0.1	%	Sim. to ISO 62
[C] Density	1560	kg/m ³	ISO 1183
Water Absorption, 24hr	0.25	%	ASTM D 570
Water Absorption, Equilibrium	0.2	%	ASTM D 570
Density	1560	kg/m ³	ASTM D 792

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Characteristics**Processing**

Injection Molding

Delivery form

Pellets, Natural Color

Additives

Lubricants, Release agent

Features

Creep Resistance, Low Warpage, Weldable, Homopolymer

Applications

Automotive

Regional Availability

North America, Europe, Asia Pacific, South and Central America, Near East/Africa

Other text information**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.