

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® 311DP is a medium-high viscosity acetal homopolymer with enhanced crystallization for faster cycle times and excellent creep and fatigue resistance. It has improved thermal stability, excellent dimensional stability, low warpage and fewer voids.

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
^[C] Melt volume-flow rate, MVR	6	cm ³ /10min	ISO 1133
Temperature	190	°C	-
Load	2.16	kg	-
^[C] Molding shrinkage, parallel	1.9	%	ISO 294-4, 2577
^[C] Molding shrinkage, normal	1.8	%	ISO 294-4, 2577

[C]: CAMPUS

Mechanical properties	Value	Unit	Test Standard
ISO Data			
^[C] Tensile Modulus	3300	MPa	ISO 527
^[C] Yield stress	74	MPa	ISO 527
^[C] Yield strain	15	%	ISO 527
^[C] Nominal strain at break	35	%	ISO 527
^[C] Tensile creep modulus, 1h	2400	MPa	ISO 899-1
^[C] Tensile creep modulus, 1000h	1200	MPa	ISO 899-1
^[C] Charpy impact strength, +23°C	300	kJ/m ²	ISO 179/1eU
^[C] Charpy impact strength, -30°C	250	kJ/m ²	ISO 179/1eU
^[C] Charpy notched impact strength, +23°C	9	kJ/m ²	ISO 179/1eA
^[C] Charpy notched impact strength, -30°C	8	kJ/m ²	ISO 179/1eA

[C]: CAMPUS

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	103	°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	110	E-6/K	ISO 11359-1/-2
^[C] Coeff. of linear therm. expansion, normal	110	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	0.8	mm	-
Yellow Card available	yes	-	-

[C]: CAMPUS

Electrical properties	Value	Unit	Test Standard
ISO Data			
^[C] Relative permittivity, 100Hz	3.8	-	IEC 62631-2-1
^[C] Relative permittivity, 1MHz	3.8	-	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]: CAMPUS

Other properties	Value	Unit	Test Standard
^[C] Water absorption	0.9	%	Sim. to ISO 62
^[C] Humidity absorption	0.2	%	Sim. to ISO 62
^[C] Density	1420	kg/m ³	ISO 1183

[C]: CAMPUS

Characteristics**Processing**

Injection Molding, Profile Extrusion, Sheet Extrusion, Other Extrusion

Features

Homopolymer

Delivery form

Pellets, Natural Color

Regional Availability

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

Additives

Lubricants, Release agent

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.