

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® FG511DP is a medium 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. It has been developed for applications in contact with food.

FOOD CONTACT

This product is manufactured according to Good Manufacturing Practice (GMP) principles and generally accepted in food contact applications in Europe and the USA when meeting applicable use conditions. For details, individual compliance statements are available from your DuPont representative.

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
^[C] Melt volume-flow rate, MVR	13	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	3500	MPa	ISO 527
^[C] Yield stress	75	MPa	ISO 527
^[C] Yield strain	12	%	ISO 527
^[C] Nominal strain at break	25	%	ISO 527
^[C] Charpy impact strength, +23°C	220	kJ/m ²	ISO 179/1eU
^[C] Charpy impact strength, -30°C	200	kJ/m ²	ISO 179/1eU
^[C] Charpy notched impact strength, +23°C	6.5	kJ/m ²	ISO 179/1eA
^[C] Charpy notched impact strength, -30°C	6	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	107	°C	ISO 75-1/-2
^[C] Temp. of deflection under load, 0.45 MPa	163	°C	ISO 75-1/-2
^[C] Vicat softening temperature, B	160	°C	ISO 306
^[C] Coeff. of linear therm. expansion, parallel	100	E-6/K	ISO 11359-1/-2
^[C] Coeff. of linear therm. expansion, normal	110	E-6/K	ISO 11359-1/-2

[C]: CAMPUS

Other properties	Value	Unit	Test Standard
^[C] Water absorption	0.9	%	Sim. to ISO 62
^[C] Humidity absorption	0.3	%	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 AvailabilityNorth 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.