

**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® 111DP is a 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   |
|--|-------|------------------------|-----------------|
| <b>ISO Data</b>                            |       |                        |                 |
| <sup>[C]</sup> Melt volume-flow rate, MVR  | 2.1   | cm <sup>3</sup> /10min | ISO 1133        |
| Temperature                                | 190   | °C                     | -               |
| Load                                       | 2.16  | kg                     | -               |
| <sup>[C]</sup> Molding shrinkage, parallel | 2.1   | %                      | ISO 294-4, 2577 |
| <sup>[C]</sup> Molding shrinkage, normal   | 1.9   | %                      | ISO 294-4, 2577 |

[C]: CAMPUS

| Mechanical properties                                | Value | Unit              | Test Standard |
|--|-------|-------------------|---------------|
| <b>ISO Data</b>                                      |       |                   |               |
| <sup>[C]</sup> Tensile Modulus                       | 3200  | MPa               | ISO 527       |
| <sup>[C]</sup> Yield stress                          | 73    | MPa               | ISO 527       |
| <sup>[C]</sup> Yield strain                          | 24    | %                 | ISO 527       |
| <sup>[C]</sup> Nominal strain at break               | 35    | %                 | ISO 527       |
| <sup>[C]</sup> Tensile creep modulus, 1h             | 2300  | MPa               | ISO 899-1     |
| <sup>[C]</sup> Tensile creep modulus, 1000h          | 1100  | MPa               | ISO 899-1     |
| <sup>[C]</sup> Charpy impact strength, +23°C         | N     | kJ/m <sup>2</sup> | ISO 179/1eU   |
| <sup>[C]</sup> Charpy impact strength, -30°C         | 340   | kJ/m <sup>2</sup> | ISO 179/1eU   |
| <sup>[C]</sup> Charpy notched impact strength, +23°C | 11    | kJ/m <sup>2</sup> | ISO 179/1eA   |
| <sup>[C]</sup> Charpy notched impact strength, -30°C | 9.5   | kJ/m <sup>2</sup> | ISO 179/1eA   |

[C]: CAMPUS

| Thermal properties   | Value | Unit  | Test Standard   |
|--|-------|-------|-----------------|
| <b>ISO Data</b>  |       |       |                 |
| <sup>[C]</sup> Melting temperature, 10°C/min               | 178   | °C    | ISO 11357-1/-3  |
| <sup>[C]</sup> Temp. of deflection under load, 1.80 MPa    | 98    | °C    | ISO 75-1/-2     |
| <sup>[C]</sup> Temp. of deflection under load, 0.45 MPa    | 165   | °C    | ISO 75-1/-2     |
| <sup>[C]</sup> Coeff. of linear therm. expansion, parallel | 100   | E-6/K | ISO 11359-1/-2  |
| <sup>[C]</sup> Coeff. of linear therm. expansion, normal   | 100   | E-6/K | ISO 11359-1/-2  |
| <sup>[C]</sup> Burning Behav. at 1.5 mm nom. thickn.       | HB    | class | IEC 60695-11-10 |
| Thickness tested   | 1.5   | mm    | -               |
| Yellow Card available                                      | yes   | -     | -               |
| <sup>[C]</sup> Burning Behav. at thickness h               | HB    | class | IEC 60695-11-10 |
| Thickness tested   | 0.8   | mm    | -               |
| Yellow Card available                                      | yes   | -     | -               |

[C]: CAMPUS

| Other properties       | Value | Unit              | Test Standard |
|------------------------|-------|-------------------|---------------|
| <sup>[C]</sup> Density | 1420  | kg/m <sup>3</sup> | 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.