

DuPont™ Delrin® FG400XRD NC010

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® FG400XRD is a filled, medium viscosity acetal copolymer for injection molding. It is detected in x-ray detectors. 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.

| General information | Value | Unit | Test Standard |
|---|----------|-------------------|----------------------|
| Resin Identification | POM-XD25 | - | ISO 1043 |
| Part Marking Code | POM-XD25 | - | ISO 11469 |
| Rheological properties | Value | Unit | Test Standard |
| Melt mass-flow rate | 13 | g/10min | ISO 1133 |
| Melt mass-flow rate, Temperature | 190 | °C | ISO 1133 |
| Melt mass-flow rate, Load | 2.16 | kg | ISO 1133 |
| Mechanical properties | Value | Unit | Test Standard |
| Tensile Modulus | 3200 | MPa | ISO 527-1/-2 |
| Yield stress | 50 | MPa | ISO 527-1/-2 |
| Yield strain | 8 | % | ISO 527-1/-2 |
| Nominal strain at break | 24 | % | ISO 527-1/-2 |
| Charpy impact strength, 73°F | 80 | kJ/m ² | ISO 179/1eU |
| Charpy notched impact strength, 73°F | 4 | kJ/m ² | ISO 179/1eA |
| Thermal properties | Value | Unit | Test Standard |
| Melting temperature, 18°F/min | 168 | °C | ISO 11357-1/-3 |
| Temp. of deflection under load, 260 psi | 96 | °C | ISO 75-1/-2 |
| Coeff. of linear therm. expansion, parallel | 120 | E-6/K | ISO 11359-1/-2 |
| Coeff. of linear therm. expansion, normal | 120 | E-6/K | ISO 11359-1/-2 |
| Flammability | Value | Unit | Test Standard |
| FMVSS Class | B | - | ISO 3795 (FMVSS 302) |
| Burning rate, Thickness 1 mm | <100 | mm/min | ISO 3795 (FMVSS 302) |
| Other properties | Value | Unit | Test Standard |
| Density | 1750 | kg/m ³ | ISO 1183 C |
| Density of melt | 1430 | kg/m ³ | - |
| C: Calculated | | | |
| 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 | 205 | °C | - |
| Min. melt temperature | 200 | °C | - |
| Max. melt temperature | 210 | °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 | - |

To find out more, visit [DuPont Performance Polymers](#) or contact nearest DuPont location.

North America

Asia Pacific

Europe/Middle East/Africa

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Characteristics

| | | |
|-----------------------|--|---|
| Processing | • Injection Molding • Profile Extrusion | • Sheet Extrusion • Other Extrusion |
| Delivery form | • Pellets | |
| 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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North America

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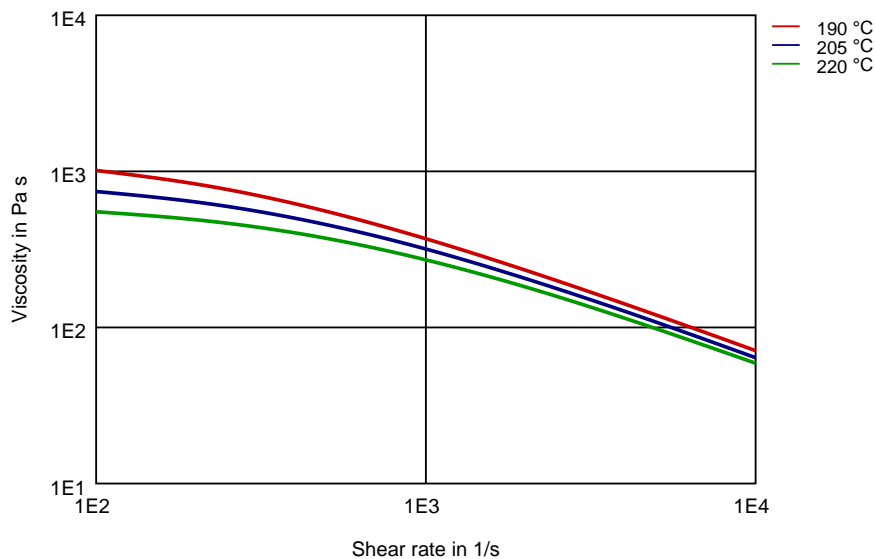


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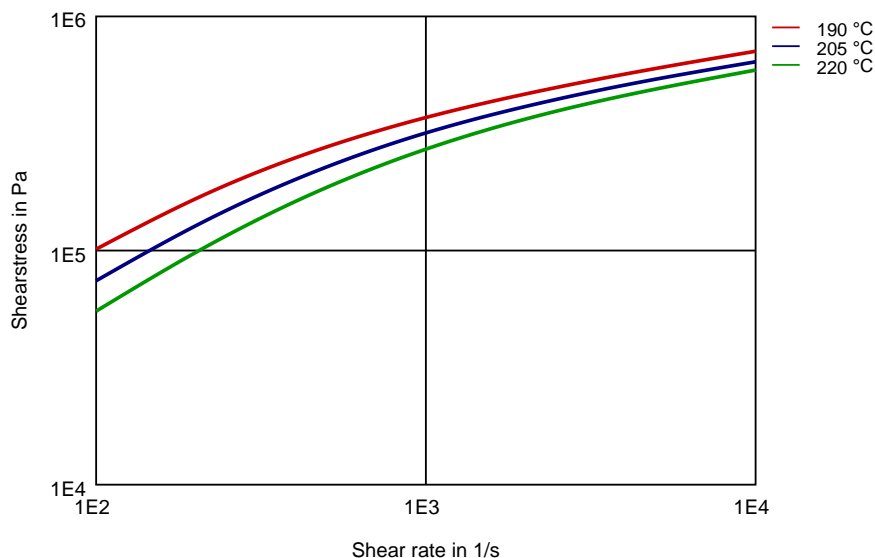
ACETAL RESIN

Diagrams

Viscosity-shear rate



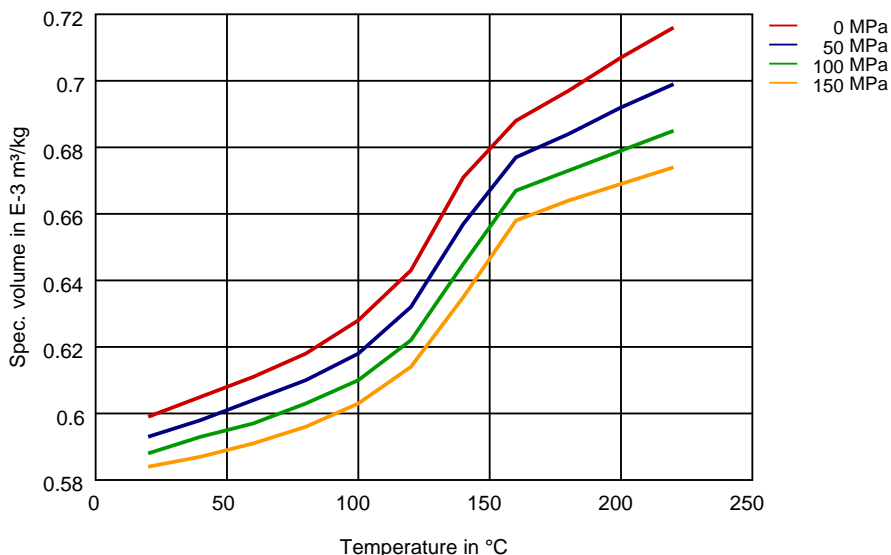
Shearstress-shear rate



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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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