

# 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 <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength, 73°F	4	kJ/m <sup>2</sup>	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 <sup>3</sup>	ISO 1183 C
Density of melt	1430	kg/m <sup>3</sup>	-
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

Tel: +1 302 999-4592

Toll-Free (USA): 800 441-0575

#### Asia Pacific

Tel: +81 3 5521 8600

#### Europe/Middle East/Africa

Tel: +41 22 717 51 11



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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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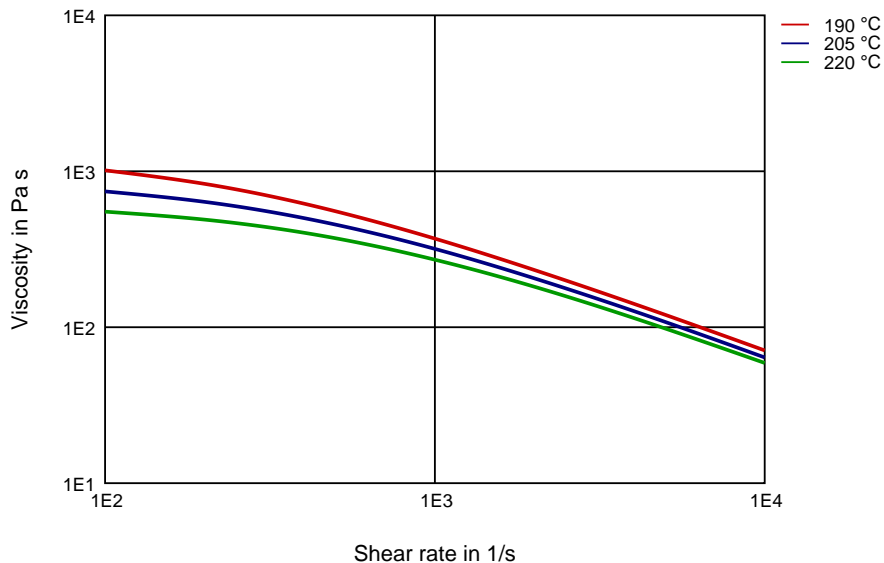


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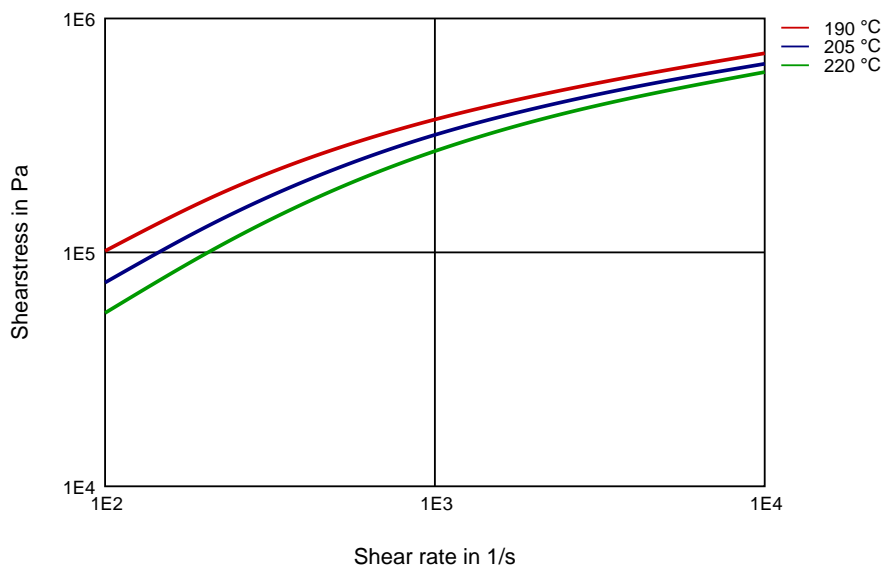
## ACETAL RESIN

### Diagrams

#### Viscosity-shear rate



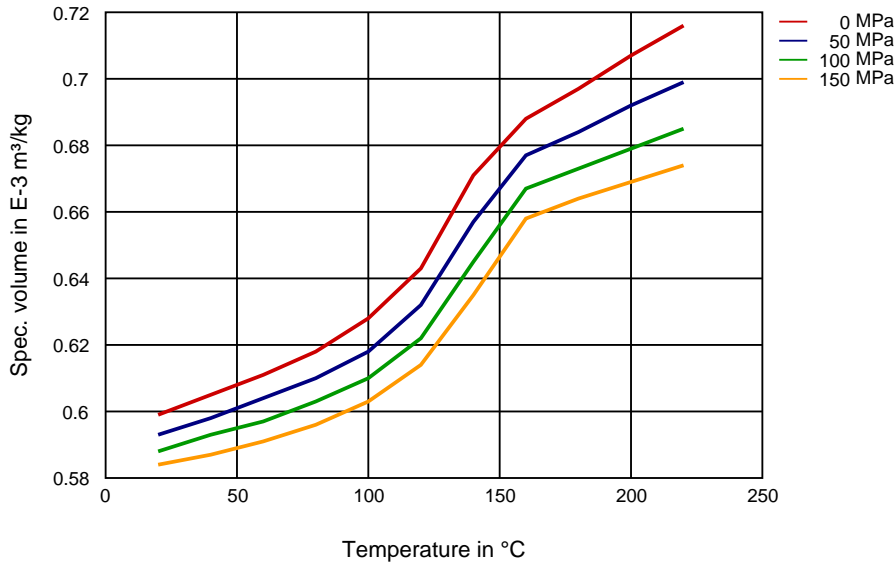
#### Shearstress-shear rate



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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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