

Delrin® 900P NC010

ACETAL RESIN

Product Description

Delrin® 900P is a low viscosity acetal homopolymer for injection molding. It has improved processing thermal stability, good mechanical properties, and low volatile emissions.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific • Central America	• Europe • Latin America • North America	• South America
Features	• Fatigue Resistant • Good Creep Resistance • Good Dimensional Stability	• High Stiffness • High Strength • Homopolymer	• Low Viscosity • Ultrasonic Weldable
Uses	• Engineering Parts • Gears	• General Purpose • Thin-walled Parts	
RoHS Compliance	• Contact Manufacturer		
Appearance	• Natural Color		
Forms	• Pellets		
Processing Method	• Injection Molding		
Multi-Point Data	• Isothermal Stress vs. Strain (ISO 11403-1)	• Shear Modulus vs. Temperature (ISO 11403-1)	• Viscosity vs. Shear Rate (ISO 11403-2)
Part Marking Code (ISO 11469)	• >POM<		
Resin ID (ISO 1043)	• POM		
Product Category	• Low Emissions Resins	• Unreinforced Resins	

Physical	Nominal Value Unit	Test Method
Density	1.42 g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	25 g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (190°C/2.16 kg)	21.0 cm³/10min	ISO 1133
Molding Shrinkage		ISO 294-4
Across Flow: 2.00 mm	1.9 %	
Flow: 2.00 mm	1.9 %	
Water Absorption		ISO 62
23°C, 24 hr	0.56 %	
Saturation, 23°C	1.4 %	
Equilibrium, 23°C, 50% RH	0.26 %	

Mechanical	Nominal Value Unit	Test Method
Tensile Modulus (23°C)	3300 MPa	ISO 527-2
Tensile Stress (Yield, 23°C)	71.0 MPa	ISO 527-2
Tensile Strain		
Yield, 23°C	12 %	ISO 527-2
Break, 23°C	28 %	ISO 527-2/50
Nominal Tensile Strain at Break (23°C)	23 %	ISO 527-2
Tensile Creep Modulus		ISO 899-1
1 hr	2800 MPa	
1000 hr	1500 MPa	
Flexural Modulus (23°C)	3000 MPa	ISO 178

Impact	Nominal Value Unit	Test Method
Charpy Notched Impact Strength		ISO 179/1eA
-30°C	7.0 kJ/m²	
23°C	8.0 kJ/m²	

Rev: July, 2013

Page: 1 of 5

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



Copyright © 2013 DuPont. The DuPont Oval Logo is a trademark or registered trademark of E.I. du Pont de Nemours and Company or its affiliates. All rights reserved.

Delrin® 900P NC010

ACETAL RESIN

Impact	Nominal Value Unit	Test Method
Charpy Unnotched Impact Strength		ISO 179/1eU
-30°C	200 kJ/m ²	
23°C	200 kJ/m ²	
Notched Izod Impact Strength		ISO 180/1A
-40°C	8.0 kJ/m ²	
23°C	7.0 kJ/m ²	
Hardness	Nominal Value Unit	Test Method
Rockwell Hardness		ISO 2039-2
M-Scale	92	
R-Scale	120	
Thermal	Nominal Value Unit	Test Method
Heat Deflection Temperature		
0.45 MPa, Unannealed	162 °C	ISO 75-2/B
1.8 MPa, Unannealed	94.0 °C	ISO 75-2/A
Melting Temperature ²	178 °C	ISO 11357-3
CLTE		ISO 11359-2
Flow: 23 to 55°C	0.00012 cm/cm/°C	
Transverse: 23 to 55°C	0.00012 cm/cm/°C	
RTI Elec		UL 746
0.750 mm	50.0 °C	
1.50 mm	110 °C	
3.00 mm	110 °C	
RTI Imp		UL 746
0.750 mm	50.0 °C	
1.50 mm	85.0 °C	
3.00 mm	90.0 °C	
RTI Str		UL 746
0.750 mm	50.0 °C	
1.50 mm	90.0 °C	
3.00 mm	95.0 °C	
Electrical	Nominal Value Unit	Test Method
Surface Resistivity	> 1.0E+15 ohm	IEC 60093
Volume Resistivity	1.0E+14 ohm·cm	IEC 60093
Relative Permittivity		IEC 60250
23°C, 100 Hz	3.80	
23°C, 1 MHz	3.80	
Dissipation Factor (23°C, 1 MHz)	0.0050	IEC 60250
Comparative Tracking Index	600 V	IEC 60112
Flammability	Nominal Value Unit	Test Method
Flame Rating (0.750 mm)	HB	UL 94 IEC 60695-11-10, -20
Oxygen Index	23 %	ISO 4589-2
Injection	Nominal Value Unit	
Drying Temperature	80.0 °C	
Drying Time - Desiccant Dryer	2.0 to 4.0 hr	
Suggested Max Moisture	< 0.20 %	
Processing (Melt) Temp	210 to 220 °C	
Melt Temperature, Optimum - Injection Molding	215 °C	
Mold Temperature	80.0 to 100 °C	
Mold Temperature, Optimum - Injection Molding	90 °C	

Drying Recommended

Not normally required unless
moisture content of resin exceeds
recommended level

Rev: July, 2013

Page: 2 of 5

To find out more, visit **DuPont Performance Polymers** or contact the 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

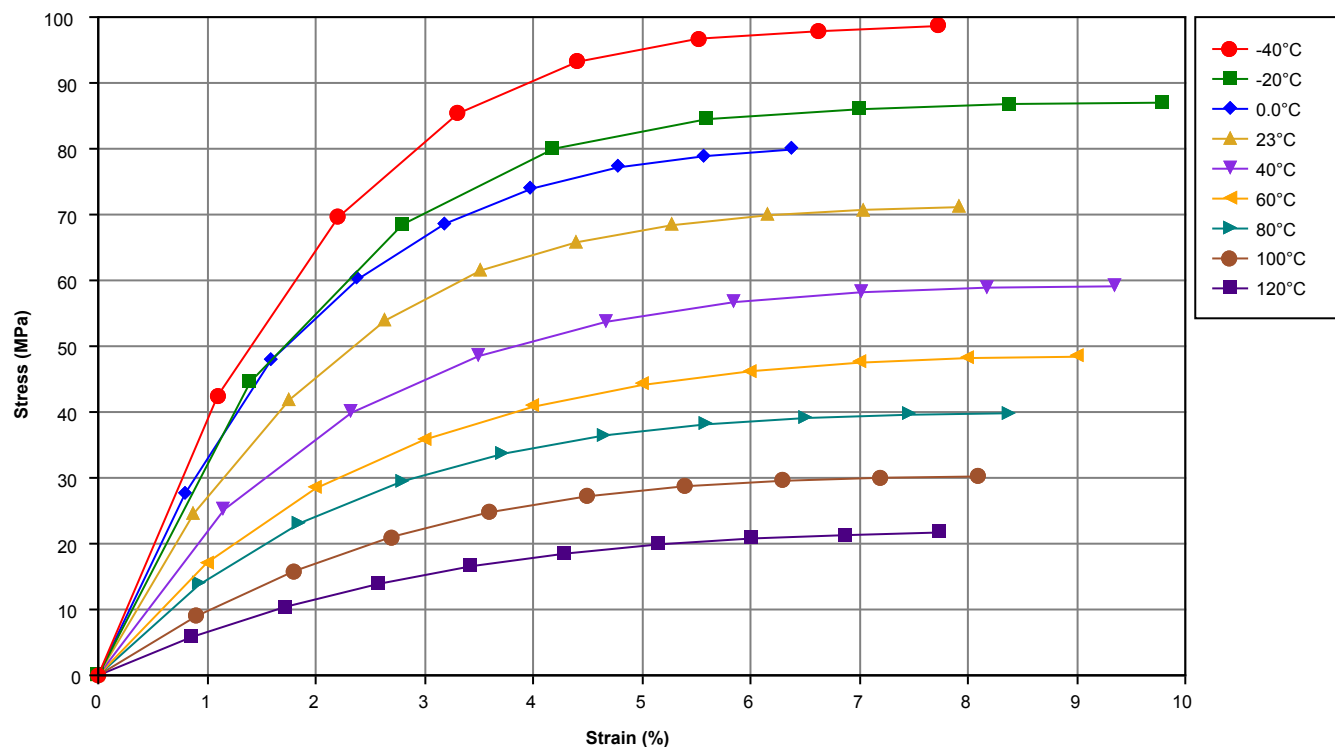
Tel: +41 22 717 51 11



Copyright © 2013 DuPont. The DuPont Oval Logo is a trademark or registered trademark of E.I. du Pont de Nemours and Company or its affiliates. All rights reserved.

Delrin® 900P NC010 ACETAL RESIN

Isothermal Stress vs. Strain (ISO 11403-1)



Rev: July, 2013

Page: 3 of 5

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

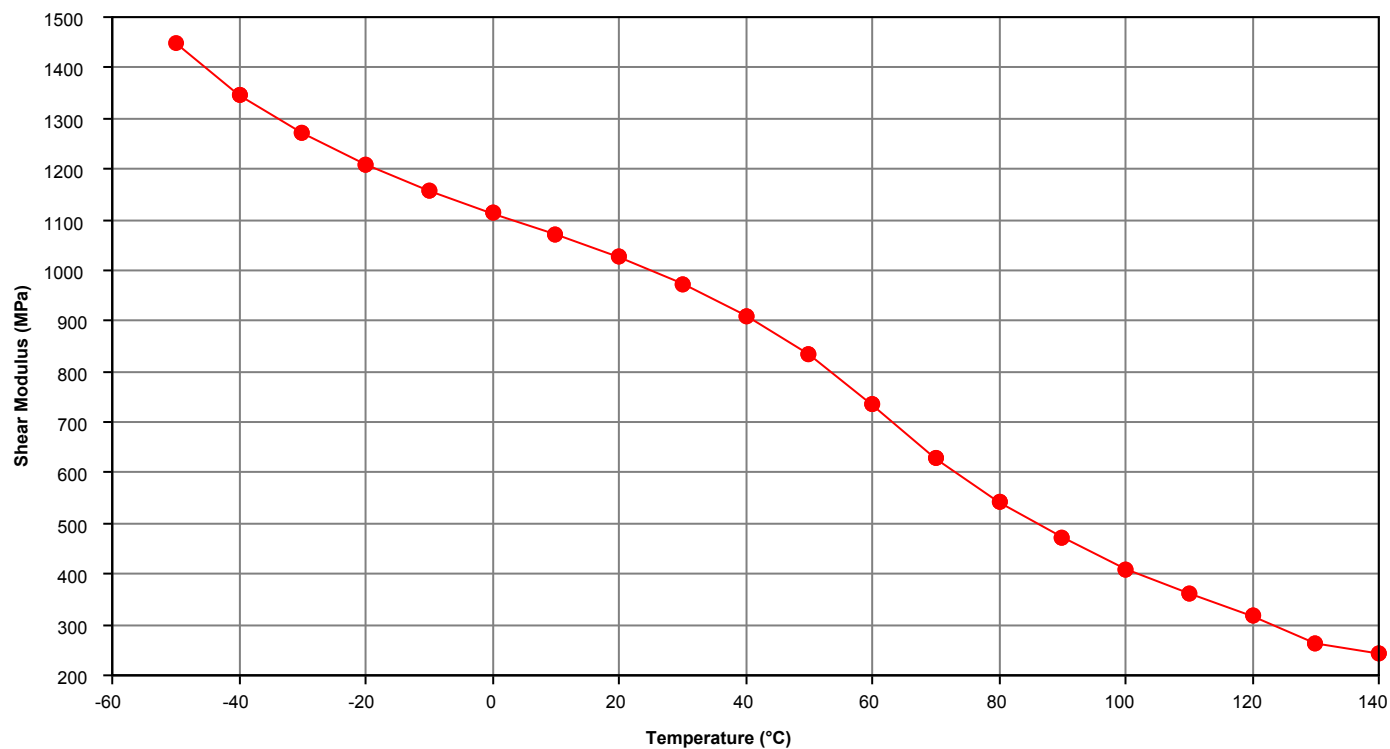
Tel: +41 22 717 51 11



Copyright © 2013 DuPont. The DuPont Oval Logo is a trademark or registered trademark of E.I. du Pont de Nemours and Company or its affiliates. All rights reserved.

Delrin® 900P NC010 ACETAL RESIN

Shear Modulus vs. Temperature (ISO 11403-1)



Rev: July, 2013

Page: 4 of 5

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

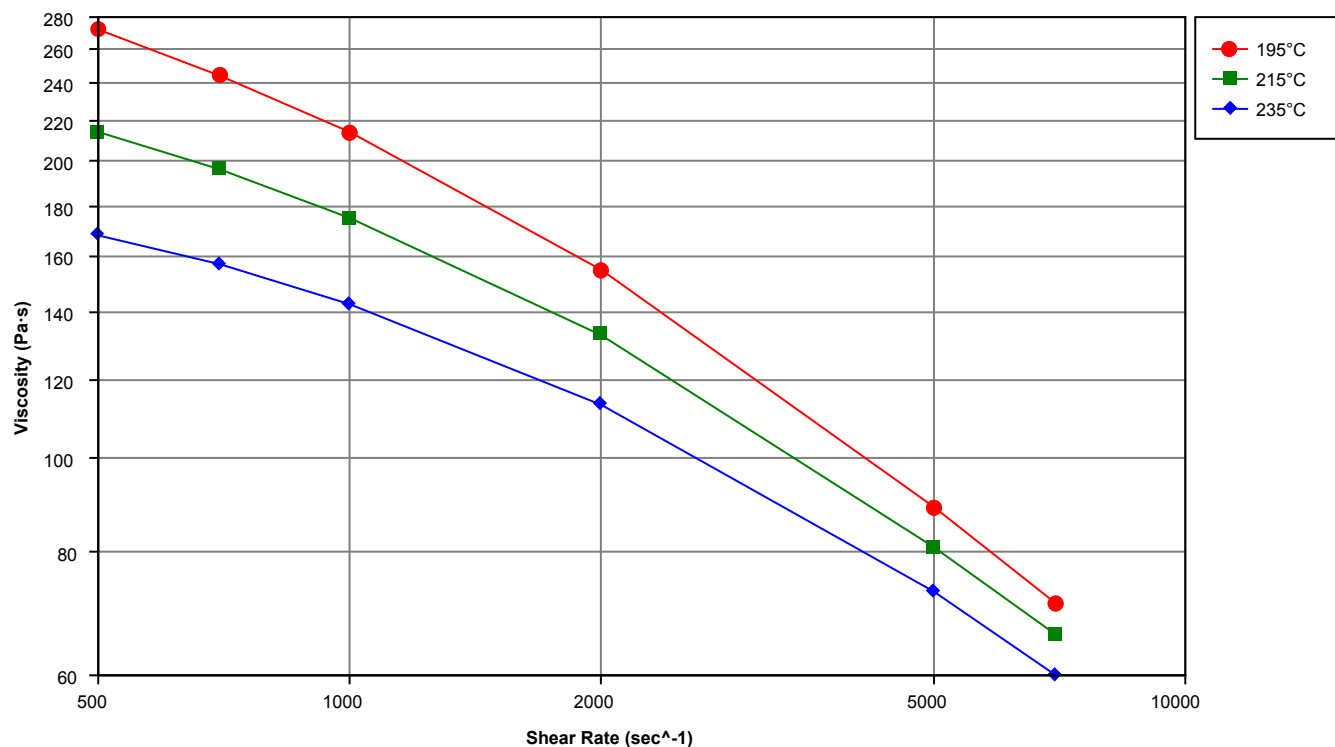
Tel: +41 22 717 51 11



Copyright © 2013 DuPont. The DuPont Oval Logo is a trademark or registered trademark of E.I. du Pont de Nemours and Company or its affiliates. All rights reserved.

Delrin® 900P NC010 ACETAL RESIN

Viscosity vs. Shear Rate (ISO 11403-2)



Notes

¹ Typical properties: these are not to be construed as specifications.

² 10°C/min

Contact DuPont for Material Safety Data Sheet, general guides and/or additional information about ventilation, handling, purging, drying, etc.

ISO Mechanical properties measured at 4.0mm, ISO Electrical properties measured at 2.0mm, and all ASTM properties measured at 3.2mm.

Test temperatures are 23°C unless otherwise stated.

The information provided in this data sheet corresponds to our knowledge on the subject at the date of its publication. This information may be subject to revision as new knowledge and experience becomes available. The data provided fall within the normal range of product properties and relate only to the specific material designated; these data may not be valid for such material used in combination with any other materials, additives or pigments or in any process, unless expressly indicated otherwise. The data provided should not be used to establish specification limits or used alone as the basis of design; they are not intended to substitute for any testing you may need to conduct to determine for yourself the suitability of a specific material for your particular purposes. Since DuPont cannot anticipate all variations in actual end-use and disposal conditions, DuPont does not guarantee favorable results, makes no warranties and assumes no liability in connection with any use of this information. All such information is given and accepted at the buyer's risk. It is intended for use by persons having technical skill, at their own discretion and risk. Nothing in this publication is to be considered as a license to operate under or a recommendation to infringe any patent. DuPont advises you to seek independent counsel for a freedom to practice opinion on the intended application or end-use of our products.

CAUTION: Do not use DuPont materials in medical applications involving implantation in the human body or contact with internal body fluids or tissues unless the material has been provided from DuPont under a written contract that is consistent with DuPont policy regarding medical applications and expressly acknowledges the contemplated use. For further information, please contact your DuPont representative. You may also request a copy of DuPont POLICY Regarding Medical Applications H-50103-4 and DuPont CAUTION Regarding Medical Applications ... H-50102-4

Rev: July, 2013

Page: 5 of 5

To find out more, visit **DuPont Performance Polymers** or contact the 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



Copyright © 2013 DuPont. The DuPont Oval Logo is a trademark or registered trademark of E.I. du Pont de Nemours and Company or its affiliates. All rights reserved.