

Delrin® 911DP NC010

ACETAL RESIN

Product Description

Delrin® 911DP is a low viscosity acetal homopolymer with improved thermal stability and modifications for more precise molding (reduced warpage, less shrinkage, fewer voids).

General

Material Status	• Preliminary Data ¹		
Availability	• Africa & Middle East • Asia Pacific • Central America	• Europe • Latin America • North America	• South America
Features	• Good Dimensional Stability		
Uses	• Engineering Parts	• Fasteners	• Gears
RoHS Compliance	• Contact Manufacturer		
Appearance	• Natural Color		
Forms	• Pellets		
Processing Method	• Injection Molding		
Part Marking Code (ISO 11469)	• >POM<		
Resin ID (ISO 1043)	• POM		
Product Category	• Unreinforced Resins		

Physical	Nominal Value Unit	Test Method
Density	1.42 g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	24 g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (190°C/2.16 kg)	21.0 cm ³ /10min	ISO 1133
Molding Shrinkage		ISO 294-4
Across Flow: 2.00 mm	1.8 %	
Flow: 2.00 mm	1.9 %	
Water Absorption		ISO 62
23°C, 24 hr	0.30 %	
Saturation, 23°C	0.90 %	
Equilibrium, 23°C, 50% RH	0.20 %	

Mechanical	Nominal Value Unit	Test Method
Tensile Modulus (23°C)	3400 MPa	ISO 527-2
Tensile Stress (Yield, 23°C)	75.0 MPa	ISO 527-2
Tensile Strain (Yield, 23°C)	10 %	ISO 527-2
Nominal Tensile Strain at Break (23°C)	20 %	ISO 527-2
Flexural Modulus (23°C)	3300 MPa	ISO 178
Flexural Strength (3.5% Strain, 23°C)	90.0 MPa	ISO 178

Impact	Nominal Value Unit	Test Method
Charpy Notched Impact Strength		ISO 179/1eA
-30°C	6.0 kJ/m ²	
23°C	6.5 kJ/m ²	
Charpy Unnotched Impact Strength		ISO 179/1eU
-30°C	150 kJ/m ²	
23°C	160 kJ/m ²	

Thermal	Nominal Value Unit	Test Method
Heat Deflection Temperature		
0.45 MPa, Unannealed	163 °C	ISO 75-2/B
1.8 MPa, Unannealed	108 °C	ISO 75-2/A
Melting Temperature ³	178 °C	ISO 11357-3

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Thermal	Nominal Value Unit	Test Method
CLTE		ISO 11359-2
Flow: -40 to 23°C	0.000090 cm/cm/°C	
Flow: 23 to 55°C	0.00010 cm/cm/°C	
Flow: 55 to 100°C	0.00014 cm/cm/°C	
Transverse: -40 to 23°C	0.000092 cm/cm/°C	
Transverse: 23 to 55°C	0.00010 cm/cm/°C	
Transverse: 55 to 100°C	0.00014 cm/cm/°C	

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

Notes

¹ The above data are preliminary and are subject to change as additional data are developed on subsequent lots.

² Typical properties: these are not to be construed as specifications.

³ 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.

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