

# Zytel® HTN WRF51G30 NC010

## HIGH PERFORMANCE POLYAMIDE RESIN

### Product Description

Zytel® HTNWRF51G30 NC010 is a 30% glass reinforced, heat stabilized, lubricated, high performance polyamide resin containing Teflon® PTFE micropowder. It is also a PPA resin.

### General

Material Status	• Preliminary Data <sup>1</sup>		
Availability	• Asia Pacific	• Europe	• North America
Filler / Reinforcement	• Glass Fiber Reinforcement, 30% Filler by Weight		
Additive	• Heat Stabilizer		
Features	• Heat Stabilized	• Ultrasonic Weldable	
RoHS Compliance	• Contact Manufacturer		
Appearance	• Natural Color		
Processing Method	• Injection Molding		
Multi-Point Data	• Isothermal Stress vs. Strain (ISO 11403-1)		
Part Marking Code (ISO 11469)	• >PA6T/XT-GF30SD<		
Product Category	• Glass Reinforced Resins	• Low Wear and Friction Resins	
Part Marking Code (SAE J1344)	• >PPA-GF30SD<		

Physical	Nominal Value Unit	Test Method
Density	1.56 g/cm <sup>3</sup>	ISO 1183
Molding Shrinkage		ISO 294-4
Across Flow: 2.00 mm	0.70 %	
Flow: 2.00 mm	0.20 %	

Mechanical	Nominal Value Unit	Test Method
Tensile Modulus (23°C)	10300 MPa	ISO 527-2
Tensile Stress (Break, 23°C)	190 MPa	ISO 527-2
Tensile Strain (Break, 23°C)	2.6 %	ISO 527-2
Flexural Modulus (23°C)	9300 MPa	ISO 178

Impact	Nominal Value Unit	Test Method
Charpy Notched Impact Strength		ISO 179/1eA
-40°C	8.5 kJ/m <sup>2</sup>	
23°C	10 kJ/m <sup>2</sup>	
Charpy Unnotched Impact Strength (23°C)	60 kJ/m <sup>2</sup>	ISO 179/1eU
Notched Izod Impact Strength		ISO 180/1A
-40°C	9.0 kJ/m <sup>2</sup>	
23°C	9.5 kJ/m <sup>2</sup>	
Unnotched Izod Impact Strength (23°C)	60 kJ/m <sup>2</sup>	ISO 180/1U

Thermal	Nominal Value Unit	Test Method
Heat Deflection Temperature		ISO 75-2/A
1.8 MPa, Unannealed	260 °C	
Melting Temperature <sup>3</sup>	300 °C	ISO 11357-3
CLTE		ISO 11359-2
Flow: -40 to 23°C	0.000016 cm/cm/°C	
Flow: 23 to 55°C	0.000015 cm/cm/°C	
Flow: 55 to 125°C	0.000011 cm/cm/°C	
Transverse: -40 to 23°C	0.000053 cm/cm/°C	
Transverse: 23 to 55°C	0.000058 cm/cm/°C	
Transverse: 55 to 125°C	0.000065 cm/cm/°C	

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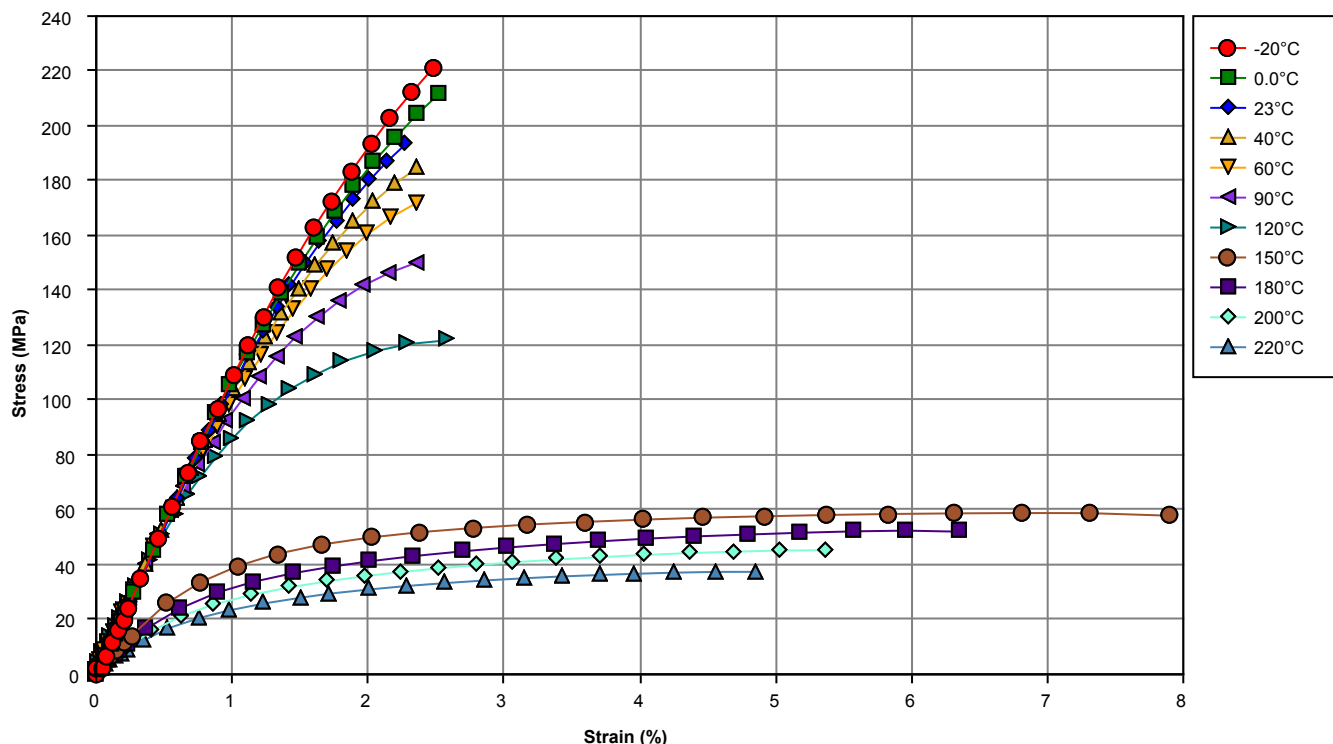
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Injection	Nominal Value Unit
Drying Temperature	100 °C
Drying Time	6.0 to 8.0 hr
Suggested Max Moisture	< 0.10 %
Processing (Melt) Temp	320 to 330 °C
Melt Temperature, Optimum	325 °C
Mold Temperature	140 to 160 °C
Mold Temperature, Optimum	150 °C

Isothermal Stress vs. Strain (ISO 11403-1)



Notes

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

<sup>2</sup> Typical properties: these are not to be construed as specifications.

<sup>3</sup> 10°C/min



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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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