

Zytel® PLUS PLS90G30DR BK099 NYLON RESIN

Product Description

Zytel® PLS90G30DR BK099 is a 30% glass reinforced PA66 nylon resin having superior resistance to hot engine coolant. It is particularly suitable for automotive Radiator End Tanks and other parts in contact with engine coolant.

General

Material Status	• Preliminary Data ¹		
Availability	• Africa & Middle East • Asia Pacific • Central America	• Europe • Latin America • North America	• South America
Filler / Reinforcement	• Glass Fiber Reinforcement, 30% Filler by Weight		
Features	• Hydrolysis Resistant	• Ultrasonic Weldable	
Uses	• Automotive Applications	• Automotive Under the Hood	• Tanks
RoHS Compliance	• Contact Manufacturer		
Appearance	• Black		
Forms	• Pellets		
Processing Method	• Injection Molding		
Multi-Point Data	• Isothermal Stress vs. Strain (ISO 11403-1)		
Part Marking Code (ISO 11469)	• >PA66-GF30<		
Resin ID (ISO 1043)	• PA66-GF30		
Product Category	• Glass Reinforced Resins	• SHIELD Technology Resins	

Physical	Dry	Conditioned	Unit	Test Method
Density	1.36	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow: 2.00 mm	0.90	--	%	
Flow: 2.00 mm	0.20	--	%	
Water Absorption				ISO 62
Saturation, 23°C	6.0	--	%	
Equilibrium, 23°C, 50% RH	1.9	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	9700	7200	MPa	ISO 527-2
Tensile Stress (Break, 23°C)	193	137	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	3.5	5.8	%	ISO 527-2
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength (23°C)	11	13	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	86	93	kJ/m ²	ISO 179/1eU
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				ISO 75-2/A
1.8 MPa, Unannealed	252	--	°C	
Melting Temperature ³	263	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow: 23 to 55°C	0.000015	--	cm/cm/°C	
Transverse: 23 to 55°C	0.00010	--	cm/cm/°C	

Injection	Dry Unit
Drying Temperature	80.0 °C
Drying Time	2.0 to 4.0 hr
Suggested Max Moisture	< 0.20 %
Processing (Melt) Temp	280 to 300 °C
Melt Temperature, Optimum	290 °C

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

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Asia Pacific

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Europe/Middle East/Africa

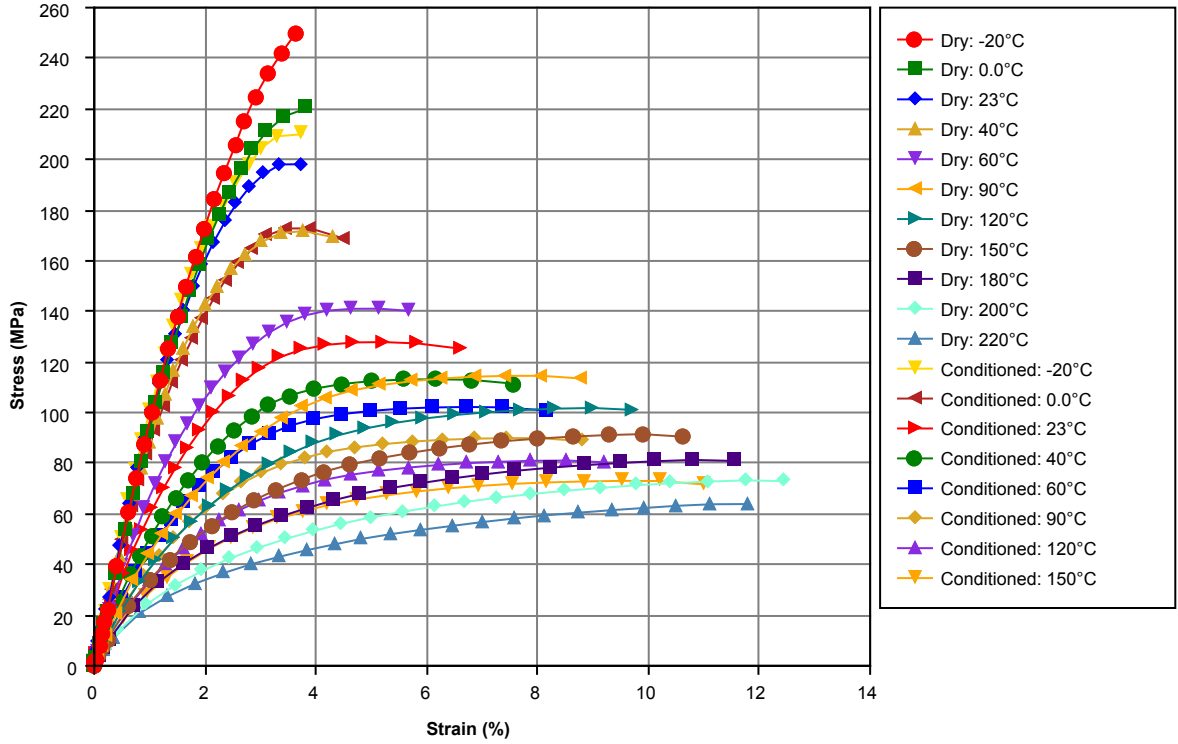
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Injection	Dry Unit
Mold Temperature	70.0 to 120 °C
Mold Temperature, Optimum	100 °C
Drying Recommended	Yes, if moisture content of resin exceeds recommended level

Isothermal Stress vs. Strain (ISO 11403-1)



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

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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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