

Zytel® 73G30L NC010

NYLON RESIN

Product Description

Zytel® 73G30L NC010 is a 30% glass fiber reinforced polyamide 6 resin for injection molding.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific • Central America	• Europe • Latin America • North America	• South America
Filler / Reinforcement	• Glass Fiber Reinforcement, 30% Filler by Weight		
Additive	• Lubricant		
Features	• General Purpose • Good Stiffness • Good Strength	• Good Surface Finish • High Gloss • Lubricated	• Ultrasonic Weldable
Uses	• Appliance Components • High Gloss Applications	• Industrial Applications • Sporting Goods	
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)	
Part Marking Code (ISO 11469)	• >PA6-GF30<		
Resin ID (ISO 1043)	• PA6-GF30		
Product Category	• Glass Reinforced Resins		

Physical	Dry	Conditioned	Unit	Test Method
Density	1.36	--	g/cm³	ISO 1183
Molding Shrinkage				
Flow: 1.60 mm	0.20	--	%	Internal Method
Flow: 3.20 mm	0.20	--	%	Internal Method
Across Flow: 1.60 mm	1.0	--	%	Internal Method
Across Flow: 3.20 mm	1.0	--	%	Internal Method
Across Flow: 2.00 mm	0.60	--	%	ISO 294-4
Flow: 2.00 mm	0.20	--	%	ISO 294-4
Water Absorption				ISO 62
Saturation, 23°C	6.3	--	%	
Equilibrium, 23°C, 50% RH	1.9	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	9800	6000	MPa	ISO 527-2
Tensile Stress				
Break, 23°C	185	115	MPa	ISO 527-2
23°C	178	117	MPa	ASTM D638
Tensile Elongation (Break, 23°C)	3.5	6.0	%	ASTM D638 ISO 527-2
Tensile Creep Modulus				ISO 899-1
1 hr	--	5500	MPa	
1000 hr	--	4400	MPa	
Flexural Modulus				
23°C	8820	4480	MPa	ASTM D790
23°C	8200	--	MPa	ISO 178



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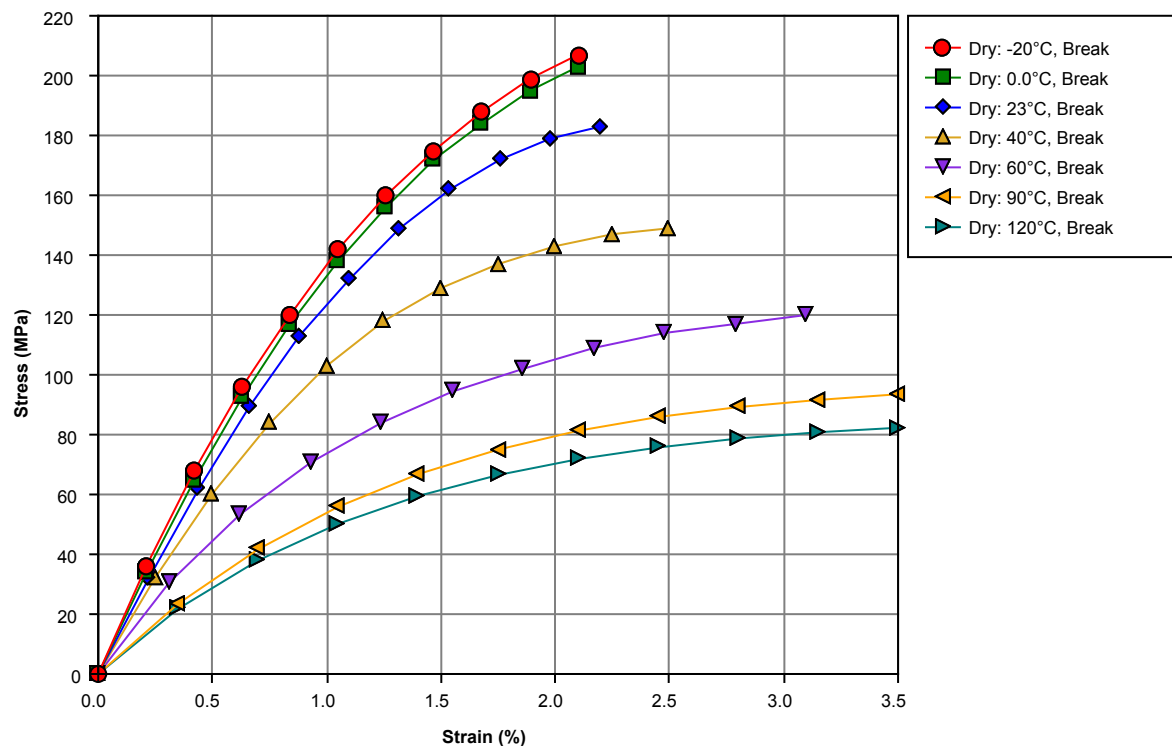
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-40°C	11	--	kJ/m ²	
-30°C	11	21	kJ/m ²	
23°C	16	23	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	80	84	kJ/m ²	
23°C	100	97	kJ/m ²	
Notched Izod Impact				
23°C	130	210	J/m	ASTM D256
-40°C	11	--	kJ/m ²	ISO 180/1A
-30°C	11	11	kJ/m ²	ISO 180/1A
23°C	15	20	kJ/m ²	ISO 180/1A
Unnotched Izod Impact				
23°C	1100	1300	J/m	ASTM D4812
-30°C	90	--	kJ/m ²	ISO 180/1U
23°C	100	--	kJ/m ²	ISO 180/1U
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load				
0.45 MPa, Unannealed	220	--	°C	ASTM D648 ISO 75-2/B
1.8 MPa, Unannealed	210	--	°C	ASTM D648 ISO 75-2/A
Glass Transition Temperature	65.0	--	°C	ISO 11357-2
Melting Temperature ²	221	--	°C	ISO 11357-3
CLTE				ASTM E831 ISO 11359-2
Flow: -40 to 23°C	0.000026	--	cm/cm/°C	
Flow: 23 to 55°C	0.000014	--	cm/cm/°C	
Flow: 55 to 160°C	0.000012	--	cm/cm/°C	
Transverse: -40 to 23°C	0.000071	--	cm/cm/°C	
Transverse: 23 to 55°C	0.00010	--	cm/cm/°C	
Transverse: 55 to 160°C	0.00012	--	cm/cm/°C	
RTI Elec				UL 746
0.750 mm	65.0	--	°C	
1.50 mm	65.0	--	°C	
3.00 mm	65.0	--	°C	
RTI Imp				UL 746
0.750 mm	65.0	--	°C	
1.50 mm	65.0	--	°C	
3.00 mm	65.0	--	°C	
RTI Str				UL 746
0.750 mm	65.0	--	°C	
1.50 mm	65.0	--	°C	
3.00 mm	65.0	--	°C	
Electrical	Dry	Conditioned	Unit	Test Method
Comparative Tracking Index (CTI)	600	--	V	UL 746
Comparative Tracking Index (CTI)	PLC 0	--		UL 746
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.750 mm	HB	--		IEC 60695-11-10, -20
1.50 mm	HB	--		
3.00 mm	HB	--		
Oxygen Index	21	--	%	ISO 4589-2



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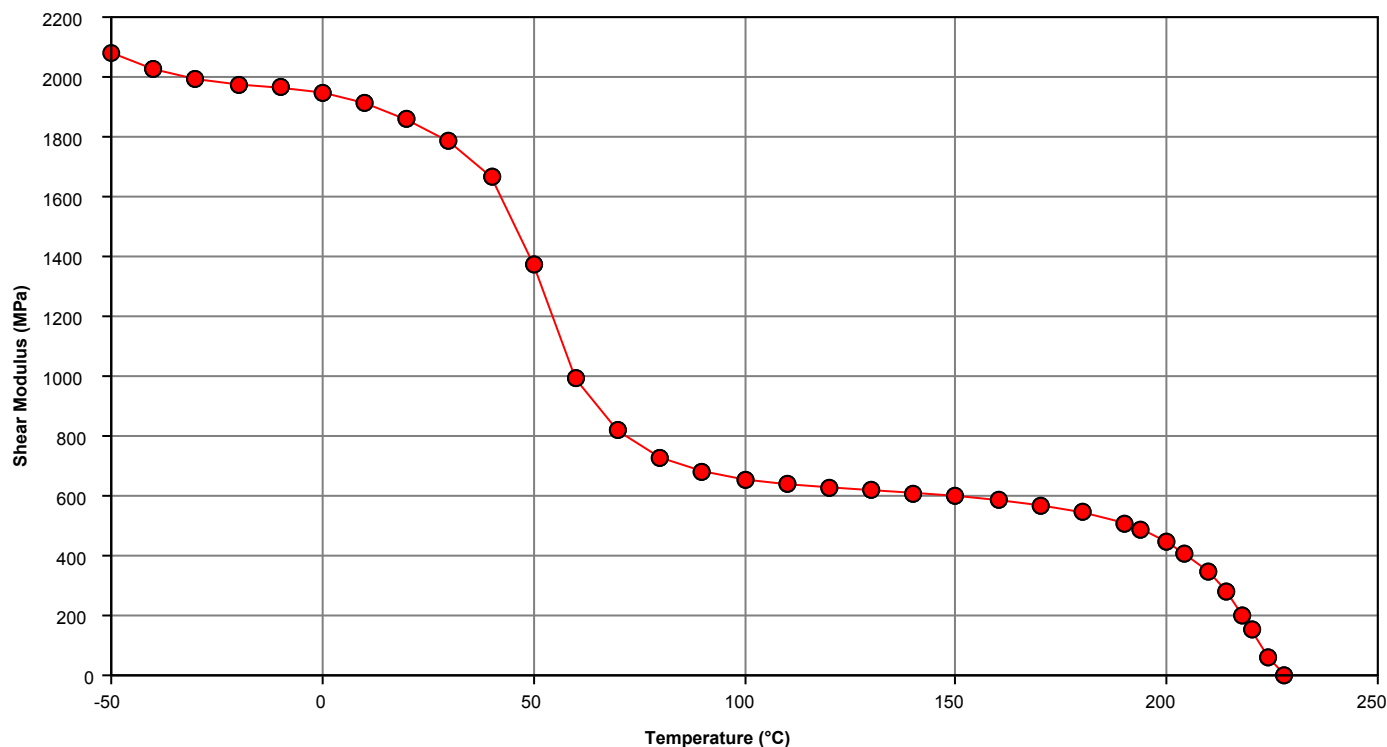
Injection	Dry Unit
Drying Temperature	80.0 °C
Drying Time	2.0 to 4.0 hr
Suggested Max Moisture	< 0.20 %
Processing (Melt) Temp	260 to 280 °C
Melt Temperature, Optimum	270 °C
Mold Temperature	70.0 to 120 °C
Mold Temperature, Optimum	100 °C
Drying Recommended	Yes, if moisture content of resin exceeds recommended level

Isothermal Stress vs. Strain (ISO 11403-1)



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Shear Modulus vs. Temperature (ISO 11403-1)



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.

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