Zytel® FG70G30HSLR NC010

NYLON RESIN

DuPont Performance Polymers

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Technical Data

Product Description			
30% Glass Reinforced, Heat Stabilized, Hydrolysis Resistant, Polyamide 66, Developed for Food Contact Applications			
General			
Material Status	• Commercial: Active		
Literature [1]	• Processing - Injection Molding (English) • Processing - Injection Molding of Glass-reinforced Zytel (English) • Typical Processing for DuPont Engineering Polymers (English)		
UL Yellow Card [2]	• E41938-100907544		
Search for UL Yellow Card	• DuPont Performance Polymers • Zytel®		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Filler / Reinforcement	• Glass Fiber, 30% Filler by Weight		
Additive	• Heat Stabilizer	• Lubricant	• Mold Release
Features	• Food Contact Acceptable	• Heat Stabilized	• Hydrolysis Resistant
Uses	• Non-specific Food Applications		
RoHS Compliance	• Contact Manufacturer		
Forms	• Pellets		
Processing Method	• Injection Molding		
Part Marking Code (ISO 11469)	• >PA66-GF30<		
Resin ID (ISO 1043)	• PA66-GF30		

Physical	Dry	Conditioned	Unit	Test Method
Density	1.37	--	g/cm³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow	1.1	--	%	
Flow	0.30	--	%	
Water Absorption				ISO 62
Saturation, 23°C, 2.00 mm	6.0	--	%	
Equilibrium, 23°C, 2.00 mm, 50% RH	1.9	--	%	
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile Modulus	10000	7200	MPa	ISO 527-2
Tensile Stress (Break)	195	130	MPa	ISO 527-2
Tensile Strain (Break)	3.3	5.0	%	ISO 527-2
Tensile Creep Modulus				ISO 899-1
1 hr	--	6800	MPa	
1000 hr	--	5100	MPa	
Impact	**Dry**	**Conditioned**	**Unit**	**Test Method**
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	10	10	kJ/m²	
23°C	13	15	kJ/m²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	70	72	kJ/m²	
23°C	82	92	kJ/m²	
Notched Izod Impact Strength				ISO 180/1A
-30°C	12	10	kJ/m²	
23°C	12	14	kJ/m²	

Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	261	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	253	--	°C	ISO 75-2/A
Glass Transition Temperature [4]	80.0	20.0	°C	ISO 11357-2
Vicat Softening Temperature	250	--	°C	ISO 306/B50
Melting Temperature [4]	262	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow	2.2E-5	--	cm/cm/°C	
Transverse	1.1E-4	--	cm/cm/°C	
Effective Thermal Diffusivity	6.85E-8	--	m²/s	

Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	--	1.0E+13	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	1.0E+11	ohms·cm	IEC 60093
Electric Strength	38	32	kV/mm	IEC 60243-1
Relative Permittivity				IEC 60250
100 Hz	4.30	11.0		
1 MHz	4.10	4.60		
Dissipation Factor				IEC 60250
100 Hz	7.0E-3	0.46		
1 MHz	0.015	0.065		
Comparative Tracking Index	450	--	V	IEC 60112

Flammability	Dry	Conditioned	Unit	Test Method
Burning Rate [5] (1.00 mm)	24	--	mm/min	ISO 3795
Flame Rating				UL 94 IEC 60695-11-10, -20
0.75 mm	HB	--		
1.5 mm	HB	--		
Oxygen Index	24	--	%	ISO 4589-2
FMVSS Flammability	SE/B	--		FMVSS 302
Fogging				ISO 6452
F-value (refraction)	95	--	%	
G-value (condensate)	3.0E-4	--	g	

Fill Analysis	Dry	Conditioned	Unit
Melt Density	1.20	--	g/cm³
Ejection Temperature	210	--	°C
Specific Heat Capacity of Melt	2290	--	J/kg/°C
Thermal Conductivity of Melt	0.21	--	W/m/K

Additional Information	Dry	Conditioned	Unit	Test Method
Emission of Organic Compounds	6.00	--	µgC/g	VDA 277
Odor	4.50	--		VDA 270

Injection	Dry Unit
Drying Temperature	80 °C
Drying Time - Desiccant Dryer	2.0 to 4.0 hr
Suggested Max Moisture	0.20 %
Processing (Melt) Temp	285 to 305 °C
Melt Temperature, Optimum	295 °C
Mold Temperature	50 to 120 °C
Mold Temperature, Optimum	100 °C
Holding Pressure	50.0 to 100 MPa
Drying Recommended	yes
Hold Pressure Time	3.00 s/mm
Maximum Screw Tangential Speed	12 m/min

Notes

[1] These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

[2] A UL Yellow Card contains UL-verified flammability and electrical characteristics. UL Prospector continually works to link Yellow Cards to individual plastic materials in Prospector, however this list may not include all of the appropriate links. It is important that you verify the association between these Yellow Cards and the plastic material found in Prospector. For a complete listing of Yellow Cards, visit the UL Yellow Card Search.

[3] Typical properties: these are not to be construed as specifications.

[4] 10°C/min

[5] FMVSS 302

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Where to Buy

Supplier

DuPont Performance Polymers
Wilmington, DE USA
Telephone: 302-999-4592
Web: http://plastics.dupont.com/

Distributor

Biesterfeld Plastic GmbH
Biesterfeld Plastic GmbH is a Pan European distribution company. Contact Biesterfeld Plastic GmbH for availability of individual products by country.
Telephone: +49-40-32008-0
Web: http://www.biesterfeld-plastic.com/
Availability: Algeria, Austria, Belgium, Bosnia and Herzegovina, Brazil, Bulgaria, Croatia, Cyprus, Czech Republic, Egypt, France, Germany, Greece, Hungary, Italy, Libyan Arab Jamahiriya, Luxembourg, Mauritania, Morocco, Netherlands, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Switzerland, Tunisia, Turkey

CCC Plastics
Telephone: 800-465-6917
Web: http://www.cccplastics.com/
Availability: Canada

Distrupol Ltd
Distrupol Ltd is a Pan European distribution company. Contact Distrupol Ltd for availability of individual products by country.
Telephone: 08452003040
Web: http://www.distrupol.com/
Availability: Denmark, Finland, Ireland, Norway, Sweden, United Kingdom

PolyOne Distribution
PolyOne Distribution is a global distribution company. Contact PolyOne Distribution for availability of individual products by country.
Telephone: 800-894-4266
Web: http://polyonedistribution.com/
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