

Zytel® FG70G30HSLR NC010

NYLON RESIN

DuPont Performance Polymers

Message:

30% Glass Reinforced, Heat Stabilized, Hydrolysis Resistant, Polyamide 66 with Developed for Food Contact Applications

General Information				
UL YellowCard		E41938-100907544		
Filler / Reinforcement		Glass fiber reinforced material, 30% filler by weight		
Additive		heat stabilizer		
		Lubricant		
		demoulding		
Features		Hydrolysis resistance		
		Thermal Stability		
		Compliance of Food Exposure		
Uses		Non-specific food applications		
RoHS Compliance		Contact manufacturer		
Forms		Particle		
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/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Transverse flow	1.1	--	%	ISO 294-4
Flow	0.30	--	%	ISO 294-4
Water Absorption				ISO 62
Saturated, 23°C, 2.00mm	6.0	--	%	ISO 62
Balance, 23°C, 2.00mm, 50% RH	1.9	--	%	ISO 62
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	ISO 899-1
1000 hr	--	5100	MPa	ISO 899-1
Impact	Dry	Conditioned	Unit	Test Method

Charpy Notched Impact Strength				ISO 179/1eA
-30°C	10	10	kJ/m ²	ISO 179/1eA
23°C	13	15	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	70	72	kJ/m ²	ISO 179/1eU
23°C	82	92	kJ/m ²	ISO 179/1eU
Notched Izod Impact				ISO 180/1A
-30°C	12	10	kJ/m ²	ISO 180/1A
23°C	12	14	kJ/m ²	ISO 180/1A
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, not annealed	261	--	°C	ISO 75-2/B
1.8 MPa, not annealed	253	--	°C	ISO 75-2/A
Glass Transition Temperature ¹	80.0	20.0	°C	ISO 11357-2
Vicat Softening Temperature	250	--	°C	ISO 306/B50
Melting Temperature ²	262	--	°C	ISO 11357-3
Linear thermal expansion coefficient				ISO 11359-2
Flow	2.2E-5	--	cm/cm/°C	ISO 11359-2
Lateral	1.1E-4	--	cm/cm/°C	ISO 11359-2
Effective Thermal Diffusivity	6.85E-8	--	m ² /s	
FMVSS Flammability	SE/B	--		FMVSS 302
Fogging				ISO 6452
F-value (refraction)	95	--	%	ISO 6452
G-value (condensate)	3.0E-4	--	g	ISO 6452
Specific Heat Capacity of Melt	2290	--	J/kg/°C	
Thermal Conductivity of Melt	0.21	--	W/m/K	
Emission of Organic Compounds	6.00	--	µgC/g	VDA 277
Odor	4.50	--		VDA 270
Melt Temperature, Optimum	295		°C	
Mold Temperature, Optimum	100		°C	
Drying Recommended	yes			
Hold Pressure Time	3.00		s/mm	
Maximum Screw Tangential Speed	200		mm/sec	

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
Dielectric Strength	38	32	kV/mm	IEC 60243-1
Relative Permittivity				IEC 60250
100 Hz	4.30	11.0		IEC 60250
1 MHz	4.10	4.60		IEC 60250
Dissipation Factor				IEC 60250
100 Hz	7.0E-3	0.46		IEC 60250
1 MHz	0.015	0.065		IEC 60250
Comparative Tracking Index	450	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Burning Rate ³ (1.00 mm)	24	--	mm/min	ISO 3795
Flame Rating				UL 94, IEC 60695-11-10, -20
0.75 mm	HB	--		UL 94, IEC 60695-11-10, -20
1.5 mm	HB	--		UL 94, IEC 60695-11-10, -20
Oxygen Index	24	--	%	ISO 4589-2
Fill Analysis	Dry	Conditioned	Unit	Test Method
Melt Density	1.20	--	g/cm ³	
Ejection Temperature	210	--	°C	
Injection	Dry	Unit		
Drying Temperature	80		°C	
Drying Time - Desiccant Dryer	2.0 - 4.0		hr	
Suggested Max Moisture	0.20		%	
Processing (Melt) Temp	285 - 305		°C	
Mold Temperature	50 - 90		°C	
Holding Pressure	50.0 - 100		MPa	
NOTE				
1.	10°C/min			
2.	10°C/min			
3.	FMVSS 302			

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