

Durethan® BG 30 X FN01 000000

Polyamide 6

LANXESS Corporation

Message:

PA 6, 30 % glass fibers/glass spheres, injection molding, halogen free flame retardant, improved flowability, improved surface finish

General Information				
Filler / Reinforcement		Glass Bead\Glass Fiber,30% Filler by Weight		
Additive		Flame Retardant		
Features		Flame Retardant		
		Good Flow		
		Good Surface Finish		
		Halogen Free		
Processing Method		Injection Molding		
Resin ID (ISO 1043)		PA GF FR (30+40)		
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.39	--	g/cm ³	ISO 1183
Apparent Density	0.70	--	g/cm ³	ISO 60
Melt Volume-Flow Rate (MVR) (260°C/2.16 kg)	27.0	--	cm ³ /10min	ISO 1133
Molding Shrinkage				ISO 2577
Across Flow : 260°C, 2.00 mm ¹	0.70	--	%	
Across Flow : 120°C, 4 hr, 2.00 mm ²	0.10	--	%	
Flow : 260°C, 2.00 mm ³	0.40	--	%	
Flow : 120°C, 4 hr, 2.00 mm ⁴	0.10	--	%	
Water Absorption				ISO 62
Saturation, 23°C	5.3	--	%	
Equilibrium, 23°C, 50% RH	1.6	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	7200	3500	MPa	ISO 527-2/1
Tensile Stress (Break, 23°C)	100	50.0	MPa	ISO 527-2/5
Tensile Strain (Break, 23°C)	3.0	7.0	%	ISO 527-2/5
Flexural Modulus ⁵ (23°C)	7000	3700	MPa	ISO 178/A
Flexural Stress				ISO 178/A
3.5% Strain,23°C	--	80.0	MPa	
23°C ⁶	145	90.0	MPa	

Flexural Strain at Flexural Strength ⁷ (23°C)	3.1	5.6	%	ISO 178/A
ISO Shortname	PA 6, GFHR, 12-070, (GB+GF)30-			ISO 1874
Residual Moisture Content	0.030 to 0.070			Karl Fisher
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	< 10	< 10	kJ/m ²	
23°C	< 10	10	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	35	35	kJ/m ²	
23°C	40	45	kJ/m ²	
Notched Izod Impact Strength				ISO 180/1A
-30°C	< 10	< 10	kJ/m ²	
23°C	< 10	10	kJ/m ²	
Unnotched Izod Impact Strength (23°C)	35	38	kJ/m ²	ISO 180/1U
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	214	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	190	--	°C	ISO 75-2/A
Vicat Softening Temperature	203	--	°C	ISO 306/B120
Ball Pressure Test (206°C)	Pass	--		IEC 60695-10-2
Melting Temperature ⁸	222	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow : 23 to 55°C	3.0E-5	--	cm/cm/°C	
Transverse : 23 to 55°C	8.0E-5	--	cm/cm/°C	
Electrical	Dry	Conditioned	Unit	Test Method
Electric Strength (23°C, 1.00 mm)	32	--	kV/mm	IEC 60243-1
Comparative Tracking Index (CTI)	PLC 0	--		UL 746
Comparative Tracking Index (Solution A)	575	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.750 mm	V-0	--		
1.50 mm	V-0	--		
3.00 mm	V-0	--		
2.00 mm	5VA	--		
Glow Wire Flammability Index				IEC 60695-2-12

0.750 mm	960	--	°C	
1.50 mm	960	--	°C	
3.00 mm	960	--	°C	
Oxygen Index ⁹	35	--	%	ISO 4589-2
Injection	Dry	Unit	Test Method	
Drying Temperature - Dry Air Dryer	80.0		°C	
Drying Time - Dry Air Dryer	2.0 to 6.0		hr	
Processing (Melt) Temp	250 to 270		°C	
Mold Temperature	80.0 to 100		°C	
NOTE				

1.	60x60x2mm, 80°C MT, 600 bar
2.	60x60x2mm
3.	60x60x2mm, 80°C MT, 600 bar
4.	60x60x2mm
5.	2.0 mm/min
6.	2.0 mm/min
7.	2 mm/min
8.	10°C/min
9.	Procedure A

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