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 Beads \Glass Fiber, 30% Filler by Weight
Additive	Flame retardancy
Features	Good liquidity Halogen-free Excellent appearance Flame retardancy
Agency Ratings	EC 1907/2006 (REACH)
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/cm³	ISO 1183
Apparent Density	0.70	--	g/cm³	ISO 60
Melt Volume-Flow Rate (MVR) (260°C/2.16 kg)	27.0	--	cm³/10min	ISO 1133
Molding Shrinkage				ISO 2577
Vertical flow direction: 260°C, 2.00mm [1]	0.70	--	%	ISO 2577
Vertical flow direction: 120°C, 4 hours, 2.00mm [2]	0.10	--	%	ISO 2577
Flow direction: 260°C, 2.00mm [3]	0.40	--	%	ISO 2577
Flow direction: 120°C, 4 hours, 2.00mm [4]	0.10	--	%	ISO 2577
Water Absorption				ISO 62
Saturated, 23°C	5.3	--	%	ISO 62
Equilibrium, 23°C, 50% RH	1.6	--	%	ISO 62

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	ISO 178/A

23°C [6]	145	90.0	MPa	ISO 178/A
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 - 0.070		%	Karl Fisher
Impact	**Dry**	**Conditioned**	**Unit**	**Test Method**
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	< 10	< 10	kJ/m²	ISO 179/1eA
23°C	< 10	10	kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	35	35	kJ/m²	ISO 179/1eU
23°C	40	45	kJ/m²	ISO 179/1eU
Notched Izod Impact				ISO 180/1A
-30°C	< 10	< 10	kJ/m²	ISO 180/1A
23°C	< 10	10	kJ/m²	ISO 180/1A
Unnotched Izod Impact Strength (23°C)	35	38	kJ/m²	ISO 180/1U
Thermal	**Dry**	**Conditioned**	**Unit**	**Test Method**
Heat Deflection Temperature				
0.45 MPa, not annealed	214	--	°C	ISO 75-2/B
1.8 MPa, not annealed	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
Linear thermal expansion coefficient				ISO 11359-2
Flow: 23 to 55°C	3.0E-5	--	cm/cm/°C	ISO 11359-2
Lateral: 23 to 55°C	8.0E-5	--	cm/cm/°C	ISO 11359-2
Electrical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Dielectric 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	--		UL 94
1.50 mm	V-0	--		UL 94
3.00 mm	V-0	--		UL 94
2.00 mm	5VA	--		UL 94

Glow Wire Flammability Index				IEC 60695-2-12
0.750 mm	960	--	°C	IEC 60695-2-12
1.50 mm	960	--	°C	IEC 60695-2-12
3.00 mm	960	--	°C	IEC 60695-2-12
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 - 6.0		hr
Processing (Melt) Temp	250 - 270		°C
Mold Temperature	80.0 - 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

Recommended distributors for this material

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