

Durethan® BG 30 X F30 000000

Polyamide 6

LANXESS GmbH

Message:

PA 6, 30 % glass fibers/glass spheres, injection molding, flame retardant, low tendency to warp, improved surface finish

General Information				
Filler / Reinforcement	Glass Beads \Glass Fiber, 30% Filler by Weight			
Additive	Flame retardancy			
Features	Low warpage			
	Excellent appearance			
	Flame retardancy			
Agency Ratings	EC 1907/2006 (REACH)			
Processing Method	Injection molding			
Resin ID (ISO 1043)	PA (GF+GB) 30 FR (17)			
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.63	--	g/cm ³	ISO 1183
Apparent Density	0.88	--	g/cm ³	ISO 60
Molding Shrinkage				ISO 2577
Vertical flow direction: 280°C, 2.00mm ¹	0.70	--	%	ISO 2577
Vertical flow direction: 120°C, 4 hours, 2.00mm ²	0.10	--	%	ISO 2577
Flow direction: 280°C, 2.00mm ³	0.40	--	%	ISO 2577
Flow direction: 120°C, 4 hours, 2.00mm ⁴	0.10	--	%	ISO 2577
Hardness	Dry	Conditioned	Unit	Test Method
Ball Indentation Hardness	210	--	MPa	ISO 2039-1
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	7500	4200	MPa	ISO 527-2/1
Tensile Stress (Break, 23°C)	105	65.0	MPa	ISO 527-2/5
Tensile Strain (Break, 23°C)	2.7	4.4	%	ISO 527-2/5
Flexural Modulus ⁵ (23°C)	7300	4200	MPa	ISO 178/A
Flexural Stress ⁶ (23°C)	175	120	MPa	ISO 178/A
Flexural Strain at Flexural Strength ⁷ (23°C)	2.8	4.2	%	ISO 178/A
ISO Shortname	PA 6, GFHR, 14-080, (GF+GB) 30-			ISO 1874
Residual Moisture Content	0.030 - 0.12		%	Karl Fisher
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	< 10	< 10	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	30	35	kJ/m ²	ISO 179/1eU
23°C	40	45	kJ/m ²	ISO 179/1eU
Notched Izod Impact				ISO 180/1A
-30°C	< 10	< 10	kJ/m ²	ISO 180/1A
23°C	< 10	10	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength				ISO 180/1U
-30°C	30	35	kJ/m ²	ISO 180/1U
23°C	40	45	kJ/m ²	ISO 180/1U
Multi-Axial Instrumented Impact Energy				ISO 6603-2
-30°C	1.80	--	J	ISO 6603-2
23°C	2.40	--	J	ISO 6603-2
Multi-Axial Instrumented Impact Peak Force				ISO 6603-2
-30°C	550	--	N	ISO 6603-2
23°C	650	--	N	ISO 6603-2
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, not annealed	210	--	°C	ISO 75-2/B
1.8 MPa, not annealed	185	--	°C	ISO 75-2/A
Vicat Softening Temperature	200	--	°C	ISO 306/B120
Ball Pressure Test (200°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	9.0E-5	--	cm/cm/°C	ISO 11359-2
Electrical	Dry	Conditioned	Unit	Test Method
Dielectric Strength (23°C, 1.00 mm)	33	--	kV/mm	IEC 60243-1
Comparative Tracking Index (CTI)	PLC 1	--		UL 746
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
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
Glow Wire Ignition Temperature				IEC 60695-2-13
0.750 mm	825	--	°C	IEC 60695-2-13
1.50 mm	800	--	°C	IEC 60695-2-13
3.00 mm	825	--	°C	IEC 60695-2-13
Oxygen Index ⁹	32	--	%	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	270 - 290		°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			

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