

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 Bead\Glass Fiber,30% Filler by Weight		
Additive		Flame Retardant		
Features		Flame Retardant		
		Good Surface Finish		
		Low Warpage		
Processing Method		Injection Molding		
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
Across Flow : 280°C, 2.00 mm ¹	0.70	--	%	
Across Flow : 120°C, 4 hr, 2.00 mm ²	0.10	--	%	
Flow : 280°C, 2.00 mm ³	0.40	--	%	
Flow : 120°C, 4 hr, 2.00 mm ⁴	0.10	--	%	
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 1043-PA (GF+GB) 30 FR (17)			ISO 1874
Residual Moisture Content	0.030 to 0.12		%	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	30	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				ISO 180/1U
-30°C	30	35	kJ/m ²	
23°C	40	45	kJ/m ²	
Multi-Axial Instrumented Impact Energy				ISO 6603-2
-30°C	1.80	--	J	
23°C	2.40	--	J	
Multi-Axial Instrumented Impact Peak Force				ISO 6603-2
-30°C	550	--	N	
23°C	650	--	N	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	210	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	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
CLTE				ISO 11359-2
Flow : 23 to 55°C	3.0E-5	--	cm/cm/°C	
Transverse : 23 to 55°C	9.0E-5	--	cm/cm/°C	
Electrical	Dry	Conditioned	Unit	Test Method
Electric 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	--		
	V-0			
1.50 mm	5VA	--		

V-0				
3.00 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	
Glow Wire Ignition Temperature				IEC 60695-2-13
0.750 mm	825	--	°C	
1.50 mm	800	--	°C	
3.00 mm	825	--	°C	
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 to 6.0		hr	
Processing (Melt) Temp	270 to 290		°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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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China



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