

Durethan® BG 30 FN05 000000

Polyamide 6

LANXESS GmbH

Message:

PA 6, 30 % glass, injection molding, halogen free flame retardant, low tendency to warp

General Information				
Filler / Reinforcement	Glass Fiber,30% Filler by Weight			
Additive	Flame Retardant			
Features	Flame Retardant			
	Halogen Free			
	Low Warpage			
Processing Method	Injection Molding			
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.41	--	g/cm ³	ISO 1183
Apparent Density	0.70	--	g/cm ³	ISO 60
Molding Shrinkage				ISO 2577
Across Flow : 260°C, 2.00 mm ¹	0.80	--	%	
Across Flow : 120°C, 4 hr, 2.00 mm ²	0.20	--	%	
Flow : 260°C, 2.00 mm ³	0.80	--	%	
Flow : 120°C, 4 hr, 2.00 mm ⁴	0.20	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	5400	2000	MPa	ISO 527-2/1
Tensile Stress (Break, 23°C)	75.0	30.0	MPa	ISO 527-2/5
Tensile Strain (Break, 23°C)	2.4	> 20	%	ISO 527-2/5
Flexural Modulus ⁵ (23°C)	5200	2000	MPa	ISO 178/A
Flexural Stress				ISO 178/A
3.5% Strain,23°C	--	40.0	MPa	
23°C ⁶	120	45.0	MPa	
Flexural Strain at Flexural Strength ⁷ (23°C)	3.3	7.0	%	ISO 178/A
ISO Shortname	PA 6, GFHR, 12-050, G30; ISO 1043-PA G FR (30)			ISO 1874
Admissible Residence Time at Tmax	< 5.0		min	
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	45	28	kJ/m ²	
23°C	55	70	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)				ISO 180/1U
45	45	kJ/m ²		
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)				
95.0	--	°C		ISO 75-2/A
Vicat Softening Temperature				
195	--	°C		ISO 306/B120
Ball Pressure Test (201°C)				
Pass	--			IEC 60695-10-2
Melting Temperature ⁸				
222	--	°C		ISO 11357-3
CLTE				
				ISO 11359-2
Flow : 23 to 55°C	6.0E-5	--	cm/cm/°C	
Transverse : 23 to 55°C	7.0E-5	--	cm/cm/°C	
Electrical	Dry	Conditioned	Unit	Test Method
Comparative Tracking Index (CTI)				
PLC 0	--			UL 746
Comparative Tracking Index (Solution A)				
550	--	V		IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				
				UL 94
0.400 mm	V-0	--		
0.750 mm	V-0	--		
1.50 mm	V-0	--		
3.00 mm	V-0	--		
Glow Wire Flammability Index				
				IEC 60695-2-12
0.400 mm	960	--	°C	
0.750 mm	960	--	°C	
1.50 mm	960	--	°C	
3.00 mm	960	--	°C	
Glow Wire Ignition Temperature				
				IEC 60695-2-13
0.400 mm	960	--	°C	
0.750 mm	900	--	°C	
1.50 mm	800	--	°C	

3.00 mm	800	--	°C
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

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|----|-----------------------------|
| 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 |

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