

Durethan® BG 30 X XF 000000

Polyamide 6

LANXESS GmbH

Message:

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

General Information				
Filler / Reinforcement		Glass Beads \Glass Fiber, 30% Filler by Weight		
Features		Low warpage		
		Good liquidity		
		Excellent appearance		
Agency Ratings		EC 1907/2006 (REACH)		
Processing Method		Injection molding		
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.32	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 2577
Vertical flow direction: 260°C, 2.00mm ¹	0.75	--	%	ISO 2577
Vertical flow direction: 120°C, 4 hours, 2.00mm ²	0.15	--	%	ISO 2577
Flow direction: 260°C, 2.00mm ³	0.60	--	%	ISO 2577
Flow direction: 120°C, 4 hours, 2.00mm ⁴	0.10	--	%	ISO 2577
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	5200	2600	MPa	ISO 527-2/1
Tensile Stress (Break, 23°C)	85.0	45.0	MPa	ISO 527-2/5
Tensile Strain (Break, 23°C)	3.2	6.9	%	ISO 527-2/5
Flexural Modulus ⁵ (23°C)	5000	2500	MPa	ISO 178/A
Flexural Stress				ISO 178/A
3.5% strain, 23°C	135	65.0	MPa	ISO 178/A
23°C ⁶	140	80.0	MPa	ISO 178/A
Flexural Strain at Flexural Strength ⁷ (23°C)	3.8	6.3	%	ISO 178/A
ISO Shortname	PA 6, GR, 10-050, (GB+GF) 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	40	35	kJ/m ²	ISO 179/1eU
23°C	50	55	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	35	30	kJ/m ²	ISO 180/1U
23°C	40	50	kJ/m ²	ISO 180/1U
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	195	--	°C	ISO 306/B120
Melting Temperature ⁸	220	--	°C	ISO 11357-3
Linear thermal expansion coefficient				ISO 11359-2
Flow: 23 to 55°C	4.0E-5	--	cm/cm/°C	ISO 11359-2
Lateral: 23 to 55°C	1.1E-4	--	cm/cm/°C	ISO 11359-2
Electrical	Dry	Conditioned	Unit	Test Method
Comparative Tracking Index (CTI)	475	--	V	UL 746
Comparative Tracking Index (Solution A)	475	--	V	IEC 60112
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 - 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			

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