

Durethan® BG 30 X W1 000000

Polyamide 6

LANXESS GmbH

Message:

PA 6, 30 % glass fibers/glass spheres, injection molding, low tendency to warp, weather stabilized

General Information				
Filler / Reinforcement		Glass Beads \Glass Fiber, 30% Filler by Weight		
Features		Low warpage		
		Good weather resistance		
Processing Method		Injection molding		
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.36	--	g/cm ³	ISO 1183
Apparent Density	0.70	--	g/cm ³	ISO 60
Molding Shrinkage				ISO 294-4
Vertical flow direction: 280°C, 2.00mm ¹	0.70	--	%	ISO 294-4
Vertical flow direction: 120°C, 2 hours, 2.00mm ²	0.20	--	%	ISO 294-4
Flow direction: 280°C, 2.00mm ³	0.50	--	%	ISO 294-4
Flow direction: 120°C, 2 hours, 2.00mm ⁴	0.10	--	%	ISO 294-4
Water Absorption				ISO 62
Saturated, 23°C	7.0	--	%	ISO 62
Equilibrium, 23°C, 50% RH	2.2	--	%	ISO 62
Hardness	Dry	Conditioned	Unit	Test Method
Ball Indentation Hardness	185	--	MPa	ISO 2039-1
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	6400	3200	MPa	ISO 527-2/1
Tensile Stress (Break, 23°C)	125	65.0	MPa	ISO 527-2/5
Tensile Strain (Break, 23°C)	4.0	10	%	ISO 527-2/5
Flexural Modulus ⁵ (23°C)	5800	2800	MPa	ISO 178/A
Flexural Stress ⁶				
3.5% strain	175	80.0	MPa	ISO 178/A
23°C	185	100	MPa	ISO 178
Flexural Strain at Flexural Strength ⁷ (23°C)	5.0	8.0	%	
Burning Behavior ⁸	passed	--		ISO 3795
ISO Shortname	PA 6, GLR, 14-060, (GB+GF) 30 --			ISO 1874

Residual Moisture Content	0.030 - 0.12		%	Karl Fisher
Films	Dry	Conditioned	Unit	Test Method
Film Puncture Energy				ISO 6603-2
-- ⁹	1.70	--	J	ISO 6603-2
-- ¹⁰	2.00	--	J	ISO 6603-2
Film Puncture Force				ISO 6603-2
-- ¹¹	690	--	N	ISO 6603-2
-- ¹²	700	--	N	ISO 6603-2
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	45	kJ/m ²	ISO 179/1eU
23°C	45	75	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	40	kJ/m ²	ISO 180/1U
23°C	35	80	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	190	--	°C	ISO 75-2/A
Vicat Softening Temperature	> 200	--	°C	ISO 306/B120
Melting Temperature ¹³	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
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 - 120		°C	
NOTE				
1.	60x60x2; MT 80°C; 600 Bar			

2.	60x60x2
3.	60x60x2; MT 80°C; 600 Bar
4.	60x60x2
5.	2.0 mm/min
6.	2.0 mm/min
7.	Pull Rate: 2 mm/min; 50% RH
8.	US-FMVSS302
9.	-30°C
10.	23°C
11.	-30°C
12.	23°C
13.	10°C/min

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