

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 Bead\Glass Fiber,30% Filler by Weight		
Features		Good Weather Resistance		
		Low Warpage		
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 2577
Across Flow : 280°C, 2.00 mm ¹	0.70	--	%	
Across Flow : 120°C, 4 hr, 2.00 mm ²	0.20	--	%	
Flow : 280°C, 2.00 mm ³	0.50	--	%	
Flow : 120°C, 4 hr, 2.00 mm ⁴	0.10	--	%	
Water Absorption				ISO 62
Saturation, 23°C	7.0	--	%	
Equilibrium, 23°C, 50% RH	2.2	--	%	
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				ISO 178/A
3.5% Strain,23°C	175	80.0	MPa	
23°C ⁶	185	100	MPa	
Flexural Strain at Flexural Strength ⁷ (23°C)	5.0	8.0	%	ISO 178/A
Burning Behavior ⁸	passed	--		ISO 3795
ISO Shortname	PA 6, GLR, 14-060, (GB+GF) 30 --			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	40	45	kJ/m ²	
23°C	45	75	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	40	kJ/m ²	
23°C	35	80	kJ/m ²	
Multi-Axial Instrumented Impact Energy				ISO 6603-2
-30°C	1.70	--	J	
23°C	2.00	--	J	
Multi-Axial Instrumented Impact Peak Force				ISO 6603-2
-30°C	690	--	N	
23°C	700	--	N	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	210	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	190	--	°C	ISO 75-2/A
Vicat Softening Temperature	> 200	--	°C	ISO 306/B120
Melting Temperature ⁹	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	
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 120		°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.	US-FMVSS302
9.	10°C/min

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