

Durethan® BG 30 X H2.0 901510

Polyamide 6
LANXESS GmbH

Message:
PA 6, 30 % glass fibers/glass spheres, injection molding, heat-aging stabilized, low tendency to warp

General Information				
UL YellowCard		E245249-100895223		
Filler / Reinforcement		Glass Bead\Glass Fiber,30% Filler by Weight		
Additive		Heat Stabilizer		
Features		Heat Stabilized		
		Low Warpage		
Processing Method		Injection Molding		
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.35	--	g/cm³	ISO 1183
Apparent Density	0.70	--	g/cm³	ISO 60
Molding Shrinkage				ISO 2577
Across Flow : 280°C, 3.00 mm ¹	0.93	--	%	
Across Flow : 120°C, 4 hr, 3.00 mm ²	0.19	--	%	
Flow : 280°C, 3.00 mm ³	0.42	--	%	
Flow : 120°C, 4 hr, 3.00 mm ⁴	0.090	--	%	
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	75.0	MPa	ISO 2039-1
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus				
23°C	6110	3010	MPa	ASTM D638
23°C	6300	3100	MPa	ISO 527-2/1
Tensile Strength				
Break, 23°C	117	57.9	MPa	ASTM D638
Break, 23°C	120	60.0	MPa	ISO 527-2/5
Tensile Elongation (Break, 23°C)	3.5	10	%	ASTM D638, ISO 527-2/5
Flexural Modulus				
23°C	5600	2700	MPa	ASTM D790

23°C ⁵	5800	2700	MPa	ISO 178/A
Flexural Strength				
23°C	199	95.1	MPa	ASTM D790
3.5% Strain, 23°C	170	75.0	MPa	ISO 178/A
23°C ⁶	185	95.0	MPa	ISO 178/A
Flexural Strain at Flexural Strength ⁷ (23°C)	4.5	7.5	%	ISO 178/A
Burning Behavior ⁸	passed	--		ISO 3795
ISO Shortname	PA 6, GHR, 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
-40°C	< 10	< 10	kJ/m ²	
-30°C	< 10	< 10	kJ/m ²	
23°C	< 10	< 10	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	35	35	kJ/m ²	
23°C	35	70	kJ/m ²	
Notched Izod Impact Strength				ISO 180/1A
-40°C	< 10	< 10	kJ/m ²	
-30°C	< 10	< 10	kJ/m ²	
Unnotched Izod Impact Strength				ISO 180/1U
-30°C	25	25	kJ/m ²	
23°C	30	50	kJ/m ²	
Multi-Axial Instrumented Impact Energy				ISO 6603-2
-30°C	2.00	--	J	
23°C	2.30	--	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	
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	1.0E+14	--	ohms	IEC 60093
Volume Resistivity (23°C)	1.0E+15	--	ohms·cm	IEC 60093
Electric Strength (23°C, 1.00 mm)	33	--	kV/mm	IEC 60243-1
Relative Permittivity				IEC 60250
23°C, 100 Hz	4.50	--		
23°C, 1 MHz	4.00	--		
Dissipation Factor				IEC 60250
23°C, 100 Hz	0.022	--		
23°C, 1 MHz	0.019	--		
Comparative Tracking Index (Solution A)	325	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
1.60 mm	HB	--		
3.20 mm	HB	--		
Glow Wire Flammability Index (2.00 mm)	650	--	°C	IEC 60695-2-12
Oxygen Index ¹⁰	23	--	%	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 120		°C	
NOTE				
1.	150x105x3mm, 80°C MT, 400 bar			
2.	150x105x3mm			
3.	150x105x3mm, 80°C MT, 400 bar			
4.	150x105x3mm			
5.	2.0 mm/min			
6.	2.0 mm/min			
7.	2 mm/min			
8.	US-FMVSS302			
9.	10°C/min			
10.	Procedure A			

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