Durethan® BG 60 X XF 900116

Polyamide 6

LANXESS GmbH

Message:

PA 6, 60 % glass fibers/glass spheres, injection molding, heat-aging stabilized, improved flowability, low tendency to warp

General Information	
Filler / Reinforcement	Micro glass bead \glass fiber, 60% filler by weight
Additive	heat stabilizer
Features	Low warpage Good liquidity Thermal Stability
Processing Method	Injection molding

Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.68	--	g/cm³	ISO 1183
Molding Shrinkage				ISO 2577
Vertical flow direction: 290°C, 2.00mm [1]	0.40	--	%	ISO 2577
Vertical flow direction: 120°C, 4 hours, 2.00mm [2]	0.050	--	%	ISO 2577
Flow direction: 290°C, 2.00mm [3]	0.35	--	%	ISO 2577
Flow direction: 120°C, 4 hours, 2.00mm [4]	0.050	--	%	ISO 2577
Vertical flow direction: 280°C, 3.00mm [5]	0.55	--	%	ISO 2577
Vertical flow direction: 120°C, 4 hours, 3.00mm [6]	0.10	--	%	ISO 2577
Flow direction: 280°C, 3.00mm [7]	0.20	--	%	ISO 2577
Flow direction: 120°C, 4 hours, 3.00mm [8]	0.050	--	%	ISO 2577

Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	19000	12300	MPa	ISO 527-2/1
Tensile Stress (Break, 23°C)	210	135	MPa	ISO 527-2/5
Tensile Strain (Break, 23°C)	2.2	3.3	%	ISO 527-2/5
Flexural Modulus [9] (23°C)	18000	12000	MPa	ISO 178/A
Flexural Stress [10] (23°C)	340	210	MPa	ISO 178/A
Flexural Strain at Flexural Strength [11] (23°C)	2.5	3.0	%	ISO 178/A
ISO Shortname	PA 6, GHR, 10-190, (GF+GB) 60--			ISO 1874
Residual Moisture Content	0.030 - 0.20		%	Karl Fisher

Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	15	15	kJ/m²	ISO 179/1eA
23°C	15	20	kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	75	70	kJ/m²	ISO 179/1eU
23°C	85	75	kJ/m²	ISO 179/1eU
Notched Izod Impact				ISO 180/1A
-30°C	15	15	kJ/m²	ISO 180/1A
23°C	15	20	kJ/m²	ISO 180/1A
Unnotched Izod Impact Strength				ISO 180/1U
-30°C	75	65	kJ/m²	ISO 180/1U
23°C	80	70	kJ/m²	ISO 180/1U

Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, not annealed	218	--	°C	ISO 75-2/B
1.8 MPa, not annealed	210	--	°C	ISO 75-2/A
Melting Temperature [12]	221	--	°C	ISO 11357-3
Linear thermal expansion coefficient				ISO 11359-2
Flow: 23 to 55°C	1.1E-5	--	cm/cm/°C	ISO 11359-2
Lateral: 23 to 55°C	8.5E-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.	60x60x2mm, 80°C MT, 600 bar
2.	60x60x2mm
3.	60x60x2mm, 80°C MT, 600 bar
4.	60x60x2mm
5.	150x105x3mm, 80°C MT, 500 bar
6.	150x105x3mm
7.	150x105x3mm, 80°C MT, 500 bar
8.	150x105x3mm

9.	2.0 mm/min
10.	2.0 mm/min
11.	2 mm/min
12.	10°C/min

Recommended distributors for this material

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