

Durethan® BM 40 X H3.0 EF 000000

Polyamide 6

LANXESS GmbH

Message:

PA 6, 40 % glass fibers/mineral, injection molding, improved flowability, heat-aging stabilized, low tendency to warp, improved surface finish

General Information				
Filler / Reinforcement		Glass \mineral, 40% filler by weight		
Additive		heat stabilizer		
Features		Low warpage		
		Good liquidity		
		Thermal Stability		
		Excellent appearance		
Agency Ratings		EC 1907/2006 (REACH)		
Processing Method		Injection molding		
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.46	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 2577
Vertical flow direction: 290°C, 2.00mm ¹	0.70	--	%	ISO 2577
Vertical flow direction: 120°C, 4 hours, 2.00mm ²	0.20	--	%	ISO 2577
Flow direction: 290°C, 2.00mm ³	0.30	--	%	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)	8500	4600	MPa	ISO 527-2/1
Tensile Stress (Break, 23°C)	125	65.0	MPa	ISO 527-2/5
Tensile Strain (Break, 23°C)	2.3	5.6	%	ISO 527-2/5
Flexural Modulus ⁵ (23°C)	8800	4800	MPa	ISO 178/A
Flexural Stress				ISO 178/A
3.5% strain, 23°C	--	115	MPa	ISO 178/A
23°C ⁶	200	125	MPa	ISO 178/A
Flexural Strain at Flexural Strength ⁷ (23°C)	2.7	4.5	%	ISO 178/A
ISO Shortname	PA 6, GHR, 10-080, (GF+MD) 40-			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 (23°C)	35	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 (23°C)	30	45	kJ/m ²	ISO 180/1U
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, not annealed	217	--	°C	ISO 75-2/B
1.8 MPa, not annealed	196	--	°C	ISO 75-2/A
Melting Temperature ⁸	219	--	°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	280 - 300		°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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