

Durethan® DP BM 65 X FM30 901510

Polyamide 6

LANXESS GmbH

Message:

PA 6, 65 % mineral/glass fibers, injection molding, halogen free flame retardant, improved flowability despite the high degree of filling

General Information				
UL YellowCard		E245249-634788		
Filler / Reinforcement		Glass \mineral, 65% filler by weight		
Features		Good liquidity		
		Halogen-free		
Agency Ratings		EC 1907/2006 (REACH)		
Processing Method		Injection molding		
Resin ID (ISO 1043)		PA (MD+GF) FR(61)		
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.69	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Vertical flow direction: 280°C, 2.00mm ¹	0.50	--	%	ISO 294-4
Vertical flow direction: 120°C, 2 hours, 2.00mm ²	0.10	--	%	ISO 294-4
Flow direction: 280°C, 2.00mm ³	0.40	--	%	ISO 294-4
Flow direction: 120°C, 2 hours, 2.00mm ⁴	0.10	--	%	ISO 294-4
Water Absorption				ISO 62
Saturated, 23°C	3.5	--	%	ISO 62
Equilibrium, 23°C, 50% RH	1.2	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	12100	6000	MPa	ISO 527-2/1
Tensile Stress (Break, 23°C)	120	73.0	MPa	ISO 527-2/5
Tensile Strain (Break, 23°C)	1.6	2.2	%	ISO 527-2/5
Flexural Modulus ⁵ (23°C)	12300	6000	MPa	ISO 178/A
Flexural Stress ⁶ (23°C)	175	110	MPa	ISO 178
Flexural Strain at Flexural Strength ⁷ (23°C)	1.8	2.6	%	
ISO Shortname	PA 6, GFHR, 14-120, (MD+GF) 65; ISO 1043-PA (MD+GF) FR (61)			ISO 1874
Residual Moisture Content	0.030 - 0.070		%	Karl Fisher
Impact	Dry	Conditioned	Unit	Test Method

Charpy Unnotched Impact Strength (23°C)	30	23	kJ/m ²	ISO 179/1eU
Notched Izod Impact (23°C)	< 10	< 10	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength (23°C)	25	22	kJ/m ²	ISO 180/1U
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, not annealed	200	--	°C	ISO 75-2/B
1.8 MPa, not annealed	181	--	°C	ISO 75-2/A
Vicat Softening Temperature	204	--	°C	ISO 306/B120
Melting Temperature ⁸	220	--	°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	5.0E-5	--	cm/cm/°C	ISO 11359-2
Electrical	Dry	Conditioned	Unit	Test Method
Dielectric Strength (23°C, 1.00 mm)	26	--	kV/mm	IEC 60243-1
Comparative Tracking Index (Solution A)	600	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
1.20 mm	V-0	--		UL 94
1.50 mm	V-0	--		UL 94
Glow Wire Flammability Index (0.800 mm)	960	--	°C	IEC 60695-2-12
Glow Wire Ignition Temperature (0.800 mm)	775	--	°C	IEC 60695-2-13
Oxygen Index ⁹	49	--	%	ISO 4589-2
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	250 - 280		°C	
Mold Temperature	80.0 - 100		°C	
NOTE				
1.	60x60x2; MT 80°C; 500 Bar			
2.	60x60x2			
3.	60x60x2; MT 80°C; 500 Bar			
4.	60x60x2			
5.	2.0 mm/min			
6.	2.0 mm/min			

7.	Pull Rate: 2 mm/min; 50% RH
8.	10°C/min
9.	Procedure A

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