

Durethan® BM 25 FN20 DUS013 000000

Polyamide 6
LANXESS GmbH

Message:
PA 6, 25 % mineral, injection molding, halogen free flame retardant, optimized for laser marking (1064nm)

General Information				
Filler / Reinforcement		Mineral filler, 25% filler by weight		
Additive		Flame retardancy		
Features		Laser marking		
		Halogen-free		
		Flame retardancy		
Agency Ratings		EC 1907/2006 (REACH)		
Processing Method		Injection molding		
Resin ID (ISO 1043)		PA MD FR (30)		
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.43	--	g/cm ³	ISO 1183
Apparent Density	0.70	--	g/cm ³	ISO 60
Molding Shrinkage				ISO 2577
Vertical flow direction: 280°C, 2.00mm ¹	0.90	--	%	ISO 2577
Vertical flow direction: 120°C, 4 hours, 2.00mm ²	0.20	--	%	ISO 2577
Flow direction: 280°C, 2.00mm ³	0.90	--	%	ISO 2577
Flow direction: 120°C, 4 hours, 2.00mm ⁴	0.20	--	%	ISO 2577
Water Absorption (Saturation, 23°C)	6.7	--	%	ISO 62
Hardness	Dry	Conditioned	Unit	Test Method
Ball Indentation Hardness	178	70.0	MPa	ISO 2039-1
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	5700	2100	MPa	ISO 527-2/1
Tensile Stress				
Yield, 23°C	80.0	30.0	MPa	ISO 527-2/50
Fracture, 23°C	80.0	30.0	MPa	ISO 527-2/5
Tensile Strain				
Yield, 23°C	3.0	8.0	%	ISO 527-2/50
Fracture, 23°C	3.0	7.0	%	ISO 527-2/5
Flexural Modulus ⁵ (23°C)	5500	2000	MPa	ISO 178/A
Flexural Stress				ISO 178/A

3.5% strain, 23°C	130	43.0	MPa	ISO 178/A
23°C ⁶	130	50.0	MPa	ISO 178/A
Flexural Strain at Flexural Strength ⁷ (23°C)	3.3	6.8	%	ISO 178/A
ISO Shortname	PA 6, GFHR, 14-060, MD25	--		ISO 1874
Residual Moisture Content	0.030 - 0.070		%	Karl Fisher
Impact	Dry	Conditioned	Unit	Test Method
Charpy Unnotched Impact Strength (23°C)	38	140	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)	30	100	kJ/m ²	ISO 180/1U
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, not annealed	195	--	°C	ISO 75-2/B
1.8 MPa, not annealed	90.0	--	°C	ISO 75-2/A
Vicat Softening Temperature	206	--	°C	ISO 306/B120
Ball Pressure Test (205°C)	Pass	--		IEC 60695-10-2
Melting Temperature ⁸	220	--	°C	ISO 11357-3
Linear thermal expansion coefficient				ISO 11359-2
Flow: 23 to 55°C	6.0E-5	--	cm/cm/°C	ISO 11359-2
Lateral: 23 to 55°C	7.0E-5	--	cm/cm/°C	ISO 11359-2
Electrical	Dry	Conditioned	Unit	Test Method
Comparative Tracking Index (CTI)	PLC 1	--		UL 746
Comparative Tracking Index (Solution A)	450	--	V	IEC 60112
High Amp Arc Ignition (HAI)	PLC 0	--		UL 746
	PLC 2			
	PLC 3			
Hot-wire Ignition (HWI)	PLC 4	--		UL 746
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.750 mm	V-2	--		UL 94
1.50 mm	V-2	--		UL 94
3.00 mm	V-2	--		UL 94
Glow Wire Flammability Index				IEC 60695-2-12
0.800 mm	960	--	°C	IEC 60695-2-12

1.50 mm	960	--	°C	IEC 60695-2-12
3.00 mm	960	--	°C	IEC 60695-2-12
Glow Wire Ignition Temperature				IEC 60695-2-13
0.750 mm	725	--	°C	IEC 60695-2-13
1.50 mm	725	--	°C	IEC 60695-2-13
3.00 mm	725	--	°C	IEC 60695-2-13
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 - 270		°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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