

Durethan® BKV 20 FN01 000000

Polyamide 6

LANXESS GmbH

Message:

PA 6, 18 % glass fibers, injection molding, halogen free flame retardant

General Information				
Filler / Reinforcement		Glass fiber reinforced material, 18% filler by weight		
Features		Halogen-free		
		Flame retardancy		
Processing Method		Injection molding		
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.34	--	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (260°C/5.0 kg)	37.0	--	cm ³ /10min	ISO 1133
Molding Shrinkage				ISO 294-4
Vertical flow direction: 260°C, 2.00mm ¹	0.60	--	%	ISO 294-4
Vertical flow direction: 120°C, 2 hours, 2.00mm ²	0.20	--	%	ISO 294-4
Flow direction: 260°C, 2.00mm ³	0.30	--	%	ISO 294-4
Flow direction: 120°C, 2 hours, 2.00mm ⁴	0.10	--	%	ISO 294-4
Water Absorption				ISO 62
Saturated, 23°C	5.3	--	%	ISO 62
Equilibrium, 23°C, 50% RH	1.6	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	7960	4500	MPa	ISO 527-2/1
Tensile Stress (Break, 23°C)	110	60.0	MPa	ISO 527-2/5
Tensile Strain (Break, 23°C)	3.0	4.9	%	ISO 527-2/5
Flexural Modulus ⁵ (23°C)	7200	4200	MPa	ISO 178/A
Flexural Stress ⁶				
3.5% strain	--	95.0	MPa	ISO 178/A
23°C	170	110	MPa	ISO 178
Flexural Strain at Flexural Strength ⁷ (23°C)	3.2	6.0	%	
ISO Shortname	PA 6, GFHR, 12-080, GF18; ISO 4043-PA GF FR (30+40+72)			ISO 1874
Residual Moisture Content	0.030 - 0.070		%	Karl Fisher
Impact	Dry	Conditioned	Unit	Test Method

Charpy Unnotched Impact Strength (23°C)	50	60	kJ/m ²	ISO 179/1eU
Notched Izod Impact (23°C)	< 10	12	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength (23°C)	40	45	kJ/m ²	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	200	--	°C	ISO 75-2/A
Vicat Softening Temperature	205	--	°C	ISO 306/B120
Melting Temperature ⁸	222	--	°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
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	8.6E+15	--	ohms	IEC 60093
Volume Resistivity (23°C)	5.3E+17	--	ohms · cm	IEC 60093
Comparative Tracking Index (CTI)	PLC 0	--		UL 746
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.750 mm	V-0	--		UL 94
1.50 mm	V-0	--		UL 94
3.00 mm	5VA	--		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	750	--	°C	IEC 60695-2-13
1.50 mm	750	--	°C	IEC 60695-2-13
3.00 mm	750	--	°C	IEC 60695-2-13
Oxygen Index ⁹	34	--	%	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 - 270		°C	
Mold Temperature	80.0		°C	

NOTE	
1.	60x60x2; MT 80°C; 600 Bar
2.	60x60x2
3.	60x60x2; MT 80°C; 600 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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