

Durethan® BKV 20 FN20 000000

Polyamide 6

LANXESS GmbH

Message:

PA 6, 20 % glass fibers, injection molding, halogen free flame retardant

General Information				
UL YellowCard		E245249-100074961		
Filler / Reinforcement		Glass fiber reinforced material, 20% filler by weight		
Additive		Flame retardancy		
Features		Halogen-free		
		Flame retardancy		
Processing Method		Injection molding		
Resin ID (ISO 1043)		PA GF FR (30)		
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.31	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 2577
Vertical flow direction: 260°C, 2.00mm ¹	0.70	--	%	ISO 2577
Vertical flow direction: 120°C, 4 hours, 2.00mm ²	0.10	--	%	ISO 2577
Flow direction: 260°C, 2.00mm ³	0.60	--	%	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)	6100	3100	MPa	ISO 527-2/1
Tensile Stress (Break, 23°C)	100	55.0	MPa	ISO 527-2/5
Tensile Strain (Break, 23°C)	3.0	15	%	ISO 527-2/5
Flexural Modulus ⁵ (23°C)	6100	3200	MPa	ISO 178/A
Flexural Stress				ISO 178/A
3.5% strain, 23°C	165	75.0	MPa	ISO 178/A
23°C ⁶	170	90.0	MPa	ISO 178/A
Flexural Strain at Flexural Strength ⁷ (23°C)	4.5	7.0	%	ISO 178/A
ISO Shortname	PA 6, GFHR, 12-060, GF20	--		ISO 1874
Residual Moisture Content	0.030 - 0.070		%	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/m²	ISO 179/1eA
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	30	--	kJ/m²	ISO 179/1eU
23°C	35	100	kJ/m²	ISO 179/1eU
Notched Izod Impact				ISO 180/1A
-30°C	< 10	< 10	kJ/m²	ISO 180/1A
23°C	< 10	11	kJ/m²	ISO 180/1A
Unnotched Izod Impact Strength (23°C)				ISO 180/1U
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, not annealed	215	--	°C	ISO 75-2/B
1.8 MPa, not annealed	185	--	°C	ISO 75-2/A
Vicat Softening Temperature				
	205	--	°C	ISO 306/B120
Ball Pressure Test (212°C)				
	Pass	--		IEC 60695-10-2
Melting Temperature ⁸				
	222	--	°C	ISO 11357-3
Linear thermal expansion coefficient				
				ISO 11359-2
Flow: 23 to 55°C	4.0E-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				
	5.0E+14	--	ohms	IEC 60167
Volume Resistivity (23°C)				
	6.0E+15	--	ohms · cm	IEC 60093
Dielectric Strength (23°C, 1.00 mm)				
	32	--	kV/mm	IEC 60243-1
Comparative Tracking Index (CTI)				
	PLC 1	--		UL 746
Comparative Tracking Index (Solution A)				
	525	--	V	IEC 60112
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
0.750 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	775	--	°C	IEC 60695-2-13

1.50 mm	775	--	°C	IEC 60695-2-13
3.00 mm	775	--	°C	IEC 60695-2-13
Oxygen Index ⁹	27	--	%	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 - 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
9.	Procedure A

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