

Durethan® BKV 30 N1 000000

Polyamide 6

LANXESS Corporation

Message:

PA 6, 30 % glass fibers, injection molding, flame retardant

General Information				
Filler / Reinforcement		Glass fiber reinforced material, 30% filler by weight		
Additive		Flame retardancy		
Features		Flame retardancy		
Processing Method		Injection molding		
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.58	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 2577
Vertical flow direction: 280°C, 2.00mm ¹	0.60	--	%	ISO 2577
Vertical flow direction: 120°C, 4 hours, 2.00mm ²	0.12	--	%	ISO 2577
Flow direction: 280°C, 2.00mm ³	0.22	--	%	ISO 2577
Flow direction: 120°C, 4 hours, 2.00mm ⁴	0.040	--	%	ISO 2577
Water Absorption				ISO 62
Saturated, 23°C	5.1	--	%	ISO 62
Equilibrium, 23°C, 50% RH	1.5	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	11700	6500	MPa	ISO 527-2/1
Tensile Stress				
Yield, 23°C	--	80.0	MPa	ISO 527-2/50
Fracture, 23°C	140	80.0	MPa	ISO 527-2/5
Tensile Strain				
Yield, 23°C	--	3.5	%	ISO 527-2/50
Fracture, 23°C	2.0	3.6	%	ISO 527-2/5
Nominal Tensile Strain at Break (23°C)	--	4.0	%	ISO 527-2/50
Flexural Modulus ⁵ (23°C)	11000	7500	MPa	ISO 178/A
Flexural Stress ⁶ (23°C)	230	145	MPa	ISO 178/A
Flexural Strain at Flexural Strength ⁷ (23°C)	2.5	3.5	%	ISO 178/A
ISO Shortname	PA 6, GFR, 14-120, GF30; ISO1043-PA GF FR (22)			ISO 1874
Residual Moisture Content	0.030 - 0.070		%	Karl Fisher

Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-40°C	< 10	< 10	kJ/m ²	ISO 179/1eA
-30°C	< 10	< 10	kJ/m ²	ISO 179/1eA
23°C	12	12	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	60	45	kJ/m ²	ISO 179/1eU
23°C	60	55	kJ/m ²	ISO 179/1eU
Notched Izod Impact				ISO 180/1A
-40°C	< 10	< 10	kJ/m ²	ISO 180/1A
-30°C	< 10	< 10	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength (23°C)	50	45	kJ/m ²	ISO 180/1U
Multi-Axial Instrumented Impact Energy				ISO 6603-2
-30°C	5.00	--	J	ISO 6603-2
23°C	7.00	9.00	J	ISO 6603-2
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, not annealed	220	--	°C	ISO 75-2/B
1.8 MPa, not annealed	205	--	°C	ISO 75-2/A
8.0 MPa, not annealed	135	--	°C	ISO 75-2/C
Vicat Softening Temperature	> 200	--	°C	ISO 306/B50, ISO 306/B120
Melting Temperature ⁸	225	--	°C	ISO 11357-3
Linear thermal expansion coefficient				ISO 11359-2
Flow: 23 to 55°C	2.0E-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	1.0E+15	1.0E+14	ohms	IEC 60093
Volume Resistivity (23°C)	1.0E+14	1.0E+13	ohms·cm	IEC 60093
Dielectric Strength (23°C, 1.00 mm)	28	27	kV/mm	IEC 60243-1
Relative Permittivity				IEC 60250
23°C, 100 Hz	4.70	8.00		IEC 60250
23°C, 1 MHz	4.20	4.50		IEC 60250
Dissipation Factor				IEC 60250
23°C, 100 Hz	0.013	0.13		IEC 60250
23°C, 1 MHz	0.019	0.045		IEC 60250
Comparative Tracking Index				IEC 60112

Solution a ⁹	350	--	V	IEC 60112
Solution B ¹⁰	125	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
1.60 mm	V-1	--		UL 94
3.20 mm	V-0	--		UL 94
Glow Wire Flammability Index				IEC 60695-2-12
2.00 mm	960	--	°C	IEC 60695-2-12
3.00 mm	960	--	°C	IEC 60695-2-12
Glow Wire Ignition Temperature				IEC 60695-2-13
1.60 mm	775	--	°C	IEC 60695-2-13
3.00 mm	775	--	°C	IEC 60695-2-13
Oxygen Index ¹¹	32	--	%	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	240 - 260		°C	
Mold Temperature	80.0 - 100		°C	

NOTE

- 60x60x2mm, 80°C MT, 600 bar
- 60x60x2mm
- 60x60x2mm, 80°C MT, 600 bar
- 60x60x2mm
- 2.0 mm/min
- 2.0 mm/min
- 2 mm/min
- 10°C/min
- Erosion depth: 0.300mm
- Erosion depth: 0.200mm
- Procedure A

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