

Durethan® BKV 30 N1 000000

Polyamide 6

LANXESS Corporation

Message:

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

General Information				
UL YellowCard		E245249-473592		
Filler / Reinforcement		Glass Fiber,30% Filler by Weight		
Features		Flame Retardant		
Agency Ratings		EC 1907/2006 (REACH)		
Forms		Pellets		
Processing Method		Injection Molding		
Multi-Point Data		Shear Modulus vs. Temperature (ISO 11403-1)		
Resin ID (ISO 1043)		PA GF FR(22)		
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.58	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 280°C, 2.00 mm ¹	0.60	--	%	
Across Flow : 120°C, 2 hr, 2.00 mm ²	0.12	--	%	
Flow : 280°C, 2.00 mm ³	0.22	--	%	
Flow : 120°C, 2 hr, 2.00 mm ⁴	0.040	--	%	
Water Absorption				ISO 62
Saturation, 23°C	5.1	--	%	
Equilibrium, 23°C, 50% RH	1.5	--	%	
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
Break, 23°C	140	80.0	MPa	ISO 527-2/5
Tensile Strain				
Yield, 23°C	--	3.5	%	ISO 527-2/50
Break, 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

Flexural Strain at Flexural Strength ⁷ (23°C)	2.5	3.5	%	
ISO Shortname	PA 6, GFR, 14-120, GF30; ISO1043-PA GF FR (22)			ISO 1874
Residual Moisture Content	0.030 to 0.070			Karl Fisher
Films	Dry	Conditioned	Unit	Test Method
Film Puncture Energy				ISO 6603-2
-- ⁸	5.00	--	J	
-- ⁹	7.00	9.00	J	
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-40°C	< 10	< 10	kJ/m ²	
-30°C	< 10	< 10	kJ/m ²	
23°C	12	12	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	60	45	kJ/m ²	
23°C	60	55	kJ/m ²	
Notched Izod Impact Strength				ISO 180/1A
-40°C	< 10	< 10	kJ/m ²	
-30°C	< 10	< 10	kJ/m ²	
Unnotched Izod Impact Strength (23°C)	50	45	kJ/m ²	ISO 180/1U
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	220	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	205	--	°C	ISO 75-2/A
8.0 MPa, Unannealed	135	--	°C	ISO 75-2/C
Vicat Softening Temperature	> 200	--	°C	ISO 306/B50, ISO 306/B120
Melting Temperature ¹⁰	225	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow : 23 to 55°C	2.0E-5	--	cm/cm/°C	
Transverse : 23 to 55°C	9.0E-5	--	cm/cm/°C	
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
Electric 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		
23°C, 1 MHz	4.20	4.50		
Dissipation Factor				IEC 60250

23°C, 100 Hz	0.013	0.13		
23°C, 1 MHz	0.019	0.045		
Comparative Tracking Index				IEC 60112
Solution A ¹¹	350	--	V	
Solution B ¹²	125	--	V	
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
1.60 mm	V-1	--		
3.20 mm	V-0	--		
Glow Wire Flammability Index				IEC 60695-2-12
2.00 mm	960	--	°C	
3.00 mm	960	--	°C	
Glow Wire Ignition Temperature				IEC 60695-2-13
1.60 mm	775	--	°C	
3.00 mm	775	--	°C	
Oxygen Index ¹³	32	--	%	ISO 4589-2
Injection	Dry	Unit	Test Method	
Drying Temperature - Dry Air Dryer	80.0		°C	
Drying Time - Dry Air Dryer	2.0 to 6.0		hr	
Processing (Melt) Temp	240 to 260		°C	
Mold Temperature	80.0 to 100		°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.	-30°C			
9.	23°C			
10.	10°C/min			
11.	Depth of Erosion: 0.300 mm			
12.	Depth of Erosion: 0.200 mm			
13.	Procedure A			

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