

Durethan® BKV 40 H3.0 000000

Polyamide 6

LANXESS Corporation

Message:

PA 6, 40 % glass fibers, injection molding, heat-aging stabilized

General Information				
Filler / Reinforcement		Glass Fiber,40% Filler by Weight		
Additive		Heat Stabilizer		
Features		Good Heat Aging Resistance		
Processing Method		Injection Molding		
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.46	--	g/cm ³	ISO 1183
Molding Shrinkage				
Across Flow : 280°C, 3.00 mm ¹	0.85	--	%	ISO 2577
Across Flow : 120°C, 2 hr, 3.00 mm ²	0.070	--	%	ISO 294-4
Flow : 280°C, 3.00 mm ³	0.16	--	%	ISO 2577
Flow : 120°C, 2 hr, 3.00 mm ⁴	0.030	--	%	ISO 2577
Water Absorption				ISO 62
Saturation, 23°C	6.0	--	%	
Equilibrium, 23°C, 50% RH	1.8	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	12300	7800	MPa	ISO 527-2/1
Tensile Stress (Break, 23°C)	205	130	MPa	ISO 527-2/5
Tensile Strain (Break, 23°C)	3.0	5.0	%	ISO 527-2/5
Flexural Modulus ⁵ (23°C)	11000	7300	MPa	ISO 178/A
Flexural Stress ⁶				
3.5% Strain	--	180	MPa	ISO 178/A
23°C	325	205	MPa	ISO 178
Flexural Strain at Flexural Strength ⁷ (23°C)	4.0	5.0	%	
ISO Shortname	PA 6, MHR, 14-120, GF40	--		ISO 1874
Residual Moisture Content	0.030 to 0.12		%	Karl Fisher
Films	Dry	Conditioned	Unit	Test Method
Film Puncture Energy				ISO 6603-2
-- ⁸	6.00	--	J	
-- ⁹	9.00	--	J	
Impact	Dry	Conditioned	Unit	Test Method

Charpy Notched Impact Strength				ISO 179/1eA
-30°C	13	11	kJ/m ²	
23°C	18	24	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	75	75	kJ/m ²	
23°C	90	95	kJ/m ²	
Notched Izod Impact Strength				ISO 180/1A
-30°C	13	11	kJ/m ²	
23°C	18	24	kJ/m ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	215	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	200	--	°C	ISO 75-2/A
Vicat Softening Temperature	> 200	--	°C	ISO 306/B120
Melting Temperature ¹⁰	222	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow : 23 to 55°C	2.0E-5	--	cm/cm/°C	
Transverse : 23 to 55°C	8.0E-5	--	cm/cm/°C	
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	1.0E+14	1.0E+12	ohms	IEC 60093
Volume Resistivity (23°C)	1.0E+15	1.0E+12	ohms · cm	IEC 60093
Electric Strength (23°C, 1.00 mm)	40	35	kV/mm	IEC 60243-1
Relative Permittivity				IEC 60250
23°C, 100 Hz	4.00	15.0		
23°C, 1 MHz	4.00	5.00		
Dissipation Factor				IEC 60250
23°C, 100 Hz	7.0E-3	0.20		
23°C, 1 MHz	0.015	0.12		
Comparative Tracking Index (Solution A)	525	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
1.60 mm	HB	--		
3.20 mm	HB	--		
Glow Wire Flammability Index (2.00 mm)	650	--	°C	IEC 60695-2-12
Oxygen Index ¹¹	24	--	%	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	270 to 290	°C
Mold Temperature	80.0 to 120	°C

NOTE

1.	150x150x3; MT 80°C; 400 Bar
2.	150x150x3
3.	150x150x3; MT 80°C; 400 Bar
4.	150x150x3
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.	Procedure A

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