

Durethan® BKV 50 H2.0 EF 900116

Polyamide 6

LANXESS GmbH

Message:

PA 6, 50 % glass fibers, injection molding, improved flowability, heat-aging stabilized

General Information				
Filler / Reinforcement	Glass fiber reinforced material, 50% filler by weight			
Additive	heat stabilizer			
Features	Good liquidity			
	Good heat aging resistance			
Agency Ratings	EC 1907/2006 (REACH)			
Processing Method	Injection molding			
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.57	--	g/cm ³	ISO 1183
Apparent Density	0.70	--	g/cm ³	ISO 60
Molding Shrinkage				ISO 294-4
Vertical flow direction: 280°C, 2.00mm ¹	0.60	--	%	ISO 294-4
Vertical flow direction: 120°C, 2 hours, 2.00mm ²	0.080	--	%	ISO 294-4
Flow direction: 280°C, 2.00mm ³	0.19	--	%	ISO 294-4
Flow direction: 120°C, 2 hours, 2.00mm ⁴	0.040	--	%	ISO 294-4
Hardness	Dry	Conditioned	Unit	Test Method
Ball Indentation Hardness	232	--	MPa	ISO 2039-1
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	16200	10000	MPa	ISO 527-2/1
Tensile Stress (Break, 23°C)	215	140	MPa	ISO 527-2/5
Tensile Strain (Break, 23°C)	2.7	3.5	%	ISO 527-2/5
Flexural Modulus ⁵ (23°C)	15000	9900	MPa	ISO 178/A
Flexural Stress ⁶ (23°C)	340	230	MPa	ISO 178
Flexural Strain at Flexural Strength ⁷ (23°C)	3.1	4.4	%	
ISO Shortname	PA 6, GHR, 10-160, GF50	--		ISO 1874
Residual Moisture Content	0.030 - 0.12		%	Karl Fisher
Films	Dry	Conditioned	Unit	Test Method
Film Puncture Energy				ISO 6603-2
-- ⁸	3.40	--	J	ISO 6603-2
-- ⁹	4.30	--	J	ISO 6603-2

Film Puncture Force				ISO 6603-2
-- 10	1000	--	N	ISO 6603-2
-- 11	1180	--	N	ISO 6603-2
Impact	Dry	Conditioned	Unit	Test Method
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	95	85	kJ/m ²	ISO 179/1eU
23°C	100	85	kJ/m ²	ISO 179/1eU
Notched Izod Impact				ISO 180/1A
-30°C	15	--	kJ/m ²	ISO 180/1A
23°C	17	20	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength				ISO 180/1U
-30°C	85	80	kJ/m ²	ISO 180/1U
23°C	85	80	kJ/m ²	ISO 180/1U
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	210	--	°C	ISO 75-2/A
8.0 MPa, not annealed	180	--	°C	ISO 75-2/C
Vicat Softening Temperature	214	--	°C	ISO 306/B120
Melting Temperature ¹²	222	--	°C	ISO 11357-3
Linear thermal expansion coefficient				ISO 11359-2
Flow: 23 to 55°C	1.2E-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
Volume Resistivity (23°C)	7.0E+14	4.0E+11	ohms · cm	IEC 60093
Dielectric Strength (23°C, 1.00 mm)	35	34	kV/mm	IEC 60243-1
Relative Permittivity				IEC 60250
23°C, 100 Hz	4.70	12.9		IEC 60250
23°C, 1 MHz	4.20	4.80		IEC 60250
Dissipation Factor				IEC 60250
23°C, 100 Hz	0.014	0.26		IEC 60250
23°C, 1 MHz	0.017	0.077		IEC 60250
Comparative Tracking Index (Solution A)	400	--	V	IEC 60112
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	270 - 290		°C	

Mold Temperature	80.0 - 120	°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.	-30°C	
11.	23°C	
12.	10°C/min	

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