

Durethan® BKV 15 G H2.0 900051

Polyamide 6

LANXESS GmbH

Message:

PA 6-Copolymer, 15 % glass fibers, injection molding, heat-aging stabilized, improved surface finish, weather stabilized

General Information				
Filler / Reinforcement		Glass fiber reinforced material, 15% filler by weight		
Additive		heat stabilizer		
Features		Good weather resistance		
		Thermal Stability		
		Excellent appearance		
Agency Ratings		EC 1907/2006 (REACH)		
Processing Method		Injection molding		
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.24	--	g/cm ³	ISO 1183
Apparent Density	0.70	--	g/cm ³	ISO 60
Molding Shrinkage				ISO 2577
Vertical flow direction: 280°C, 3.00mm ¹	0.67	--	%	ISO 2577
Vertical flow direction: 120°C, 4 hours, 3.00mm ²	0.21	--	%	ISO 2577
Flow direction: 280°C, 3.00mm ³	0.34	--	%	ISO 2577
Flow direction: 120°C, 4 hours, 3.00mm ⁴	0.10	--	%	ISO 2577
Water Absorption				ISO 62
Saturated, 23°C	7.8	--	%	ISO 62
Equilibrium, 23°C, 50% RH	2.6	--	%	ISO 62
Hardness	Dry	Conditioned	Unit	Test Method
Ball Indentation Hardness	190	95.0	MPa	ISO 2039-1
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus				
23°C	6310	3880	MPa	ASTM D638
23°C	6300	4000	MPa	ISO 527-2/1
Tensile Strength				
Fracture, 23°C	117	67.6	MPa	ASTM D638
Fracture, 23°C	120	70.0	MPa	ISO 527-2/5
Tensile Elongation (Break, 23°C)				
	3.0	11	%	ASTM D638, ISO 527-2/5

Flexural Modulus				
23°C	5700	3500	MPa	ASTM D790
23°C ⁵	5700	3500	MPa	ISO 178/A
Flexural Strength				
23°C	185	125	MPa	ASTM D790
3.5% strain, 23°C	--	100	MPa	ISO 178/A
23°C ⁶	185	125	MPa	ISO 178/A
Flexural Strain at Flexural Strength ⁷ (23°C)	4.0	7.0	%	ISO 178/A
Burning Behavior ⁸	passed	--		ISO 3795
ISO Shortname	PA 6/66, GHR, 14-060, GF15	--		ISO 1874
Residual Moisture Content	0.030 - 0.12		%	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	< 10	< 10	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength				
				ISO 179/1eU
-30°C	35	35	kJ/m ²	ISO 179/1eU
23°C	40	40	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				
				ISO 180/1U
-30°C	20	25	kJ/m ²	ISO 180/1U
23°C	25	35	kJ/m ²	ISO 180/1U
Multi-Axial Instrumented Impact Energy				
				ISO 6603-2
-30°C	1.50	--	J	ISO 6603-2
23°C	2.00	--	J	ISO 6603-2
Multi-Axial Instrumented Impact Peak Force				
				ISO 6603-2
-30°C	505	--	N	ISO 6603-2
23°C	560	--	N	ISO 6603-2
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, not annealed	210	--	°C	ISO 75-2/B
1.8 MPa, not annealed	180	--	°C	ISO 75-2/A
8.0 MPa, not annealed	55.0	--	°C	ISO 75-2/C
Vicat Softening Temperature	200	--	°C	ISO 306/B50, ISO 306/B120

Melting Temperature ⁹	218	--	°C	ISO 11357-3
Linear thermal expansion coefficient				ISO 11359-2
Flow: 23 to 55°C	3.0E-5	--	cm/cm/°C	ISO 11359-2
Lateral: 23 to 55°C	8.0E-5	--	cm/cm/°C	ISO 11359-2
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	1.0E+15	1.0E+13	ohms	IEC 60093
Volume Resistivity (23°C)	1.0E+13	1.0E+11	ohms·cm	IEC 60093
Dielectric Strength (23°C, 1.00 mm)	30	30	kV/mm	IEC 60243-1
Relative Permittivity				IEC 60250
23°C, 100 Hz	4.10	10.0		IEC 60250
23°C, 1 MHz	3.70	4.30		IEC 60250
Dissipation Factor				IEC 60250
23°C, 100 Hz	8.0E-3	0.22		IEC 60250
23°C, 1 MHz	0.018	0.070		IEC 60250
Comparative Tracking Index (Solution A)	375	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
1.60 mm	HB	--		UL 94
3.20 mm	HB	--		UL 94
Glow Wire Flammability Index (2.00 mm)	650	--	°C	IEC 60695-2-12
Oxygen Index ¹⁰	23	--	%	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	260 - 290		°C	
Mold Temperature	80.0 - 100		°C	
NOTE				
1.	150x105x3mm, 80°C MT, 500 bar			
2.	150x105x3mm			
3.	150x105x3mm, 80°C MT, 500 bar			
4.	150x105x3mm			
5.	2.0 mm/min			
6.	2.0 mm/min			
7.	2 mm/min			
8.	US-FMVSS302			
9.	10°C/min			
10.	Procedure A			

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