

Durethan® BKV 50 H3.0 000000

Polyamide 6

LANXESS GmbH

Message:

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

General Information				
UL YellowCard		E245249-473600		
Filler / Reinforcement		Glass fiber reinforced material, 50% filler by weight		
Additive		heat stabilizer		
Features		Good heat aging resistance		
Processing Method		Injection molding		
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.57	--	g/cm ³	ISO 1183
Apparent Density	0.70	--	g/cm ³	ISO 60
Molding Shrinkage				
Vertical flow direction: 280°C, 3.00mm ¹	0.85	--	%	ISO 2577
Vertical flow direction: 120°C, 2 hours, 3.00mm ²	0.050	--	%	ISO 294-4
Flow direction: 280°C, 3.00mm ³	0.16	--	%	ISO 2577
Flow direction: 120°C, 2 hours, 3.00mm ⁴	0.020	--	%	ISO 2577
Water Absorption				ISO 62
Saturated, 23°C	5.0	--	%	ISO 62
Equilibrium, 23°C, 50% RH	1.5	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	16800	10200	MPa	ISO 527-2/1
Tensile Stress (Break, 23°C)	225	140	MPa	ISO 527-2/5
Tensile Strain (Break, 23°C)	3.0	5.0	%	ISO 527-2/5
Flexural Modulus ⁵ (23°C)	15500	9900	MPa	ISO 178/A
Flexural Stress ⁶ (23°C)	360	230	MPa	ISO 178
Flexural Strain at Flexural Strength ⁷ (23°C)	3.0	5.0	%	
Burning Behavior ⁸ (> 1.00 mm)	passed	--		ISO 3795
ISO Shortname	PA 6, GHR, 14-160, GF50	--		ISO 1874
Residual Moisture Content	0.030 - 0.12		%	Karl Fisher
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA

-30°C	15	15	kJ/m ²	ISO 179/1eA
23°C	20	25	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	90	90	kJ/m ²	ISO 179/1eU
23°C	100	110	kJ/m ²	ISO 179/1eU
Notched Izod Impact				ISO 180/1A
-30°C	15	15	kJ/m ²	ISO 180/1A
23°C	20	25	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength				ISO 180/1U
-30°C	95	95	kJ/m ²	ISO 180/1U
23°C	95	100	kJ/m ²	ISO 180/1U
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, not annealed	215	--	°C	ISO 75-2/B
1.8 MPa, not annealed	205	--	°C	ISO 75-2/A
Vicat Softening Temperature	> 200	--	°C	ISO 306/B50, ISO 306/B120
Melting Temperature ⁹	222	--	°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	7.0E-5	--	cm/cm/°C	ISO 11359-2
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
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.	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.	US-FMVSS302
9.	10°C/min

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