

Durethan® AKV 50 000000

Polyamide 66

LANXESS GmbH

Message:

PA 66, 50% glass fibers, injection molding

General Information				
Filler / Reinforcement		Glass fiber reinforced material, 50% filler by weight		
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: 300°C, 3.00mm ¹	1.3	--	%	ISO 2577
Vertical flow direction: 120°C, 2 hours, 3.00mm ²	0.030	--	%	ISO 294-4
Flow direction: 300°C, 3.00mm ³	0.23	--	%	ISO 2577
Flow direction: 120°C, 2 hours, 3.00mm ⁴	0.020	--	%	ISO 2577
Water Absorption				ISO 62
Saturated, 23°C	4.0	--	%	ISO 62
Equilibrium, 23°C, 50% RH	1.4	--	%	ISO 62
Hardness	Dry	Conditioned	Unit	Test Method
Ball Indentation Hardness	290	160	MPa	ISO 2039-1
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	15700	10700	MPa	ISO 527-2/1
Tensile Stress (Break, 23°C)	220	170	MPa	ISO 527-2/5
Tensile Strain (Break, 23°C)	2.5	4.0	%	ISO 527-2/5
Flexural Modulus ⁵ (23°C)	14000	10300	MPa	ISO 178/A
Flexural Stress ⁶				
3.5% strain	--	235	MPa	ISO 178/A
23°C	370	250	MPa	ISO 178
Flexural Strain at Flexural Strength ⁷ (23°C)	3.0	5.0	%	
ISO Shortname	PA 66, GR, 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/m²	ISO 179/1eA
23°C	19	23	kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	100	100	kJ/m²	ISO 179/1eU
23°C	95	95	kJ/m²	ISO 179/1eU
Notched Izod Impact				ISO 180/1A
-30°C	11	11	kJ/m²	ISO 180/1A
23°C	14	18	kJ/m²	ISO 180/1A
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, not annealed	250	--	°C	ISO 75-2/B
1.8 MPa, not annealed	250	--	°C	ISO 75-2/A
Vicat Softening Temperature	> 230	--	°C	ISO 306/B120
Melting Temperature ⁸	263	--	°C	ISO 11357-3
Flammability	Dry	Conditioned	Test Method	
Flame Rating (3.20 mm)	HB	--	UL 94	
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	280 - 300	°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.	10°C/min			

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