

Durethan® AKV 50 000000

Polyamide 66

LANXESS GmbH

Message:

PA 66, 50% glass fibers, injection molding

General Information				
Filler / Reinforcement		Glass Fiber,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				ISO 2577
Across Flow : 300°C, 3.00 mm ¹	1.3	--	%	
Across Flow : 120°C, 4 hr, 3.00 mm ²	0.030	--	%	
Flow : 300°C, 3.00 mm ³	0.23	--	%	
Flow : 120°C, 4 hr, 3.00 mm ⁴	0.020	--	%	
Water Absorption				ISO 62
Saturation, 23°C	4.0	--	%	
Equilibrium, 23°C, 50% RH	1.4	--	%	
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				ISO 178/A
3.5% Strain,23°C	--	235	MPa	
23°C ⁶	370	250	MPa	
Flexural Strain at Flexural Strength ⁷ (23°C)	3.0	5.0	%	ISO 178/A
ISO Shortname	PA 66, GR, 14-160, GF50	--		ISO 1874
Residual Moisture Content	0.030 to 0.12		%	Karl Fisher
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	15	15	kJ/m ²	

23°C	19	23	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	100	100	kJ/m ²	
23°C	95	95	kJ/m ²	
Notched Izod Impact Strength				ISO 180/1A
-30°C	11	11	kJ/m ²	
23°C	14	18	kJ/m ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	250	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	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 to 6.0		hr	
Processing (Melt) Temp	280 to 300		°C	
Mold Temperature	80.0 to 120		°C	
NOTE				
1.	150x105x3mm, 80°C MT, 400 bar			
2.	150x105x3mm			
3.	150x105x3mm, 80°C MT, 400 bar			
4.	150x105x3mm			
5.	2.0 mm/min			
6.	2.0 mm/min			
7.	2 mm/min			
8.	10°C/min			

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