

Durethan® AKV 35 000000

Polyamide 66

LANXESS GmbH

Message:

PA 66, 35% glass fibers, injection molding

General Information				
Filler / Reinforcement		Glass fiber reinforced material, 35% filler by weight		
Processing Method		Injection molding		
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.41	--	g/cm ³	ISO 1183
Molding Shrinkage				
Vertical flow direction: 300°C, 3.00mm ¹	1.4	--	%	ISO 2577
Vertical flow direction: 120°C, 2 hours, 3.00mm ²	0.040	--	%	ISO 294-4
Flow direction: 300°C, 3.00mm ³	0.32	--	%	ISO 2577
Flow direction: 120°C, 2 hours, 3.00mm ⁴	0.030	--	%	ISO 2577
Water Absorption				ISO 62
Saturated, 23°C	5.0	--	%	ISO 62
Equilibrium, 23°C, 50% RH	1.8	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	11200	7500	MPa	ISO 527-2/1
Tensile Stress (Break, 23°C)	200	135	MPa	ISO 527-2/5
Tensile Strain (Break, 23°C)	3.0	5.0	%	ISO 527-2/5
Tensile Creep Modulus				ISO 899-1
1 hr	--	7000	MPa	ISO 899-1
1000 hr	--	5800	MPa	ISO 899-1
Flexural Modulus ⁵ (23°C)	10000	7000	MPa	ISO 178/A
Flexural Stress ⁶				
3.5% strain	280	170	MPa	ISO 178/A
23°C	300	220	MPa	ISO 178
Flexural Strain at Flexural Strength ⁷ (23°C)	4.0	6.0	%	
ISO Shortname	PA 66, MR, 14-120, GF35	--		ISO 1874
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	10	10	kJ/m ²	ISO 179/1eA

23°C	15	20	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	75	75	kJ/m ²	ISO 179/1eU
23°C	90	95	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
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
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	1.0E-4	--	cm/cm/°C	ISO 11359-2
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	1.0E+14	1.0E+12	ohms	IEC 60093
Volume Resistivity (23°C)	1.0E+15	1.0E+12	ohms·cm	IEC 60093
Dielectric Strength (23°C, 1.00 mm)	40	35	kV/mm	IEC 60243-1
Relative Permittivity				IEC 60250
23°C, 100 Hz	4.00	10.0		IEC 60250
23°C, 1 MHz	4.00	4.00		IEC 60250
Comparative Tracking Index				IEC 60112
Solution a	600	--	V	IEC 60112
Solution B	400	--	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)	600	--	°C	IEC 60695-2-12
Oxygen Index ⁹	23	--	%	ISO 4589-2
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
9.	Procedure A

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