

Durethan® AKV 35 HR H2.0 901510

Polyamide 66

LANXESS Corporation

Message:

PA 66, 35 % glass fibers, injection molding, heat-aging stabilized, hydrolysis stabilized

General Information				
Filler / Reinforcement		Glass fiber reinforced material, 35% filler by weight		
Additive		Hydrolysis resistance heat stabilizer		
Features		Hydrolysis resistance Thermal Stability		
Processing Method		Injection molding		
Physical	Dry	Conditioned	Unit	Test Method
Specific Gravity				
	1.41			
--	1.41	--	g/cm ³	ASTM D792
23°C	1.41	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 2577
Vertical flow direction: 300°C, 2.00mm ¹	1.1	--	%	ISO 2577
Vertical flow direction: 120°C, 4 hours, 2.00mm ²	0.090	--	%	ISO 2577
Flow direction: 300°C, 2.00mm ³	0.38	--	%	ISO 2577
Flow direction: 120°C, 4 hours, 2.00mm ⁴	0.060	--	%	ISO 2577
Water Absorption				ISO 62
Saturated, 23°C	5.2	--	%	ISO 62
Equilibrium, 23°C, 50% RH	1.7	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus				
23°C ⁵	11000	6090	MPa	ASTM D638
23°C	11500	7800	MPa	ISO 527-2/1
Tensile Strength				
Fracture, 23°C	190	--	MPa	ASTM D638
Fracture, 23°C	195	135	MPa	ISO 527-2/5
Tensile Elongation				

Fracture, 23°C	3.0	--	%	ASTM D638
Fracture, 23°C	3.1	6.0	%	ISO 527-2/5
Flexural Modulus				
23°C	10000	--	MPa	ASTM D790
23°C ⁶	10700	7000	MPa	ISO 178/A
Flexural Strength				
23°C	290	--	MPa	ASTM D790
3.5% strain, 23°C	--	180	MPa	ISO 178/A
23°C ⁷	305	210	MPa	ISO 178/A
Flexural Strain at Flexural Strength ⁸ (23°C)	3.8	6.0	%	ISO 178/A
Burning Behavior ⁹ (> 1.00 mm)	passed	--		ISO 3795
ISO Shortname	PA 66, GHRW, 14-110, GF30	--		ISO 1874
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	13	20	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	75	80	kJ/m ²	ISO 179/1eU
23°C	85	85	kJ/m ²	ISO 179/1eU
Notched Izod Impact				
23°C, 3.18 mm	140	--	J/m	ASTM D256
-30°C	10	10	kJ/m ²	ISO 180/1A
23°C	< 10	< 10	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength				ISO 180/1U
-30°C	65	--	kJ/m ²	ISO 180/1U
23°C	75	--	kJ/m ²	ISO 180/1U
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load				
0.45 MPa, unannealed, 39.9mm	> 249	--	°C	ASTM D648
0.45 MPa, not annealed	250	--	°C	ISO 75-2/B
1.8 MPa, not annealed	245	--	°C	ISO 75-2/A
1.8 MPa, annealing, 3.99mm	> 249	--	°C	ASTM D648
Vicat Softening Temperature				
--	> 230	--	°C	ISO 306/B50
--	255	--	°C	ISO 306/B120

Melting Temperature ¹⁰	262	--	°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	8.0E-5	--	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				IEC 60243-1
23°C, 1.00 mm	35	--	kV/mm	IEC 60243-1
23°C, 3.00 mm	40	35	kV/mm	IEC 60243-1
Dielectric Constant				IEC 60250
23°C, 50 Hz ¹¹	4.00	10.0		IEC 60250
23°C, 1 MHz ¹²	4.00	4.00		IEC 60250
23°C, 100 Hz	3.90	--		IEC 60250
23°C, 1 MHz	3.60	--		IEC 60250
Dissipation Factor				IEC 60250
23°C, 50 Hz	6.0E-3	1.0		IEC 60250
23°C, 100 Hz	0.010	--		IEC 60250
	0.015			
23°C, 1 MHz	4.0E-3	0.18		IEC 60250
Comparative Tracking Index (Solution A)	425	--	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 ¹³	26	--	%	ISO 4589-2
Injection	Dry	Unit		
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.	60x60x2mm, 80°C MT, 600 bar			
2.	60x60x2mm			
3.	60x60x2mm, 80°C MT, 600 bar			
4.	60x60x2mm			

5.	1.0 mm/min
6.	2.0 mm/min
7.	2.0 mm/min
8.	2 mm/min
9.	US-FMVSS302
10.	10°C/min
11.	Tinfoil Electrodes
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13.	Procedure A

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