

Durethan® AKV 30 HR H2.0 901510

Polyamide 66

LANXESS GmbH

Message:

PA 66, 30 % glass fibers, injection molding, heat-aging stabilized, hydrolysis stabilized

General Information				
UL YellowCard		E245249-542523		
Filler / Reinforcement		Glass Fiber,30% Filler by Weight		
Additive		Heat Stabilizer		
		Hydrolysis Resistant		
Features		Heat Stabilized		
		Hydrolysis Resistant		
Processing Method		Injection Molding		
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.36	--	g/cm ³	ISO 1183
Apparent Density	0.70	--	g/cm ³	ISO 60
Molding Shrinkage				ISO 2577
Across Flow : 290°C, 2.00 mm ¹	0.94	--	%	
Across Flow : 120°C, 4 hr, 2.00 mm ²	0.12	--	%	
Flow : 290°C, 2.00 mm ³	0.44	--	%	
Flow : 120°C, 4 hr, 2.00 mm ⁴	0.060	--	%	
Water Absorption				ISO 62
Saturation, 23°C	5.5	--	%	
Equilibrium, 23°C, 50% RH	2.0	--	%	
Hardness	Dry	Conditioned	Unit	Test Method
Ball Indentation Hardness	205	105	MPa	ISO 2039-1
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus				
23°C	9430	5930	MPa	ASTM D638
23°C	9700	6100	MPa	ISO 527-2/1
Tensile Strength				
Break, 23°C	175	117	MPa	ASTM D638
Break, 23°C	180	120	MPa	ISO 527-2/5
Tensile Elongation				

Break, 23°C	4.0	8.0	%	ASTM D638
Break, 23°C	3.5	8.0	%	ISO 527-2/5
Flexural Modulus				
23°C	8620	5410	MPa	ASTM D790
23°C ⁵	8600	5400	MPa	ISO 178/A
Flexural Strength				
23°C	281	181	MPa	ASTM D790
3.5% Strain, 23°C	265	150	MPa	ISO 178/A
23°C ⁶	280	180	MPa	ISO 178/A
Flexural Strain at Flexural Strength ⁷ (23°C)	4.0	6.5	%	ISO 178/A
Burning Behavior ⁸ (> 1.00 mm)	passed	--		ISO 3795
ISO Shortname	PA 66, GHWR, 14-100, GF30	--		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
-40°C	< 10	< 10	kJ/m ²	
-30°C	< 10	< 10	kJ/m ²	
23°C	10	20	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	65	75	kJ/m ²	
23°C	75	85	kJ/m ²	
Notched Izod Impact Strength				ISO 180/1A
-40°C	< 10	< 10	kJ/m ²	
-30°C	< 10	< 10	kJ/m ²	
Unnotched Izod Impact Strength				ISO 180/1U
-30°C	60	--	kJ/m ²	
23°C	70	--	kJ/m ²	
Multi-Axial Instrumented Impact Energy				ISO 6603-2
-30°C	1.90	--	J	
23°C	3.10	4.70	J	
Multi-Axial Instrumented Impact Peak Force				ISO 6603-2
-30°C	776	--	N	
23°C	896	1070	N	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	250	--	°C	ISO 75-2/B

1.8 MPa, Unannealed	245	--	°C	ISO 75-2/A
8.0 MPa, Unannealed	125	--	°C	ISO 75-2/C
Vicat Softening Temperature				
--	> 230	--	°C	ISO 306/B50
--	254	--	°C	ISO 306/B120
Melting Temperature ⁹	262	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow : 23 to 55°C	3.0E-5	--	cm/cm/°C	
Transverse : 23 to 55°C	9.0E-5	--	cm/cm/°C	
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	1.0E+15	1.0E+13	ohms	IEC 60093
Volume Resistivity (23°C)	1.0E+15	1.0E+11	ohms·cm	IEC 60093
Electric Strength (23°C, 1.00 mm)	35	30	kV/mm	IEC 60243-1
Relative Permittivity				IEC 60250
23°C, 100 Hz	4.00	12.0		
23°C, 1 MHz	3.60	4.50		
Dissipation Factor				IEC 60250
23°C, 100 Hz	8.0E-3	0.30		
23°C, 1 MHz	0.016	0.090		
Comparative Tracking Index (Solution A)	450	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
1.60 mm	HB	--		
3.20 mm	HB	--		
Glow Wire Flammability Index (2.00 mm)	650	--	°C	IEC 60695-2-12
Oxygen Index ¹⁰	26	--	%	ISO 4589-2
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.	60x60x2mm, 80°C MT, 600 bar			
2.	60x60x2mm			
3.	60x60x2mm, 80°C MT, 600 bar			
4.	60x60x2mm			
5.	2.0 mm/min			

6.	2.0 mm/min
7.	2 mm/min
8.	US-FMVSS302
9.	10°C/min
10.	Procedure A

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