

Durethan® AKV 30 H3.0 000000

Polyamide 66

LANXESS GmbH

Message:

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

General Information				
UL YellowCard		E245249-473555		
Filler / Reinforcement		Glass fiber reinforced material, 30% filler by weight		
Additive		heat stabilizer		
Features		Good heat aging resistance		
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 294-4
Vertical flow direction: 300°C, 2.00mm ¹	1.1	--	%	ISO 294-4
Vertical flow direction: 120°C, 2 hours, 2.00mm ²	0.10	--	%	ISO 294-4
Flow direction: 300°C, 2.00mm ³	0.40	--	%	ISO 294-4
Flow direction: 120°C, 2 hours, 2.00mm ⁴	0.040	--	%	ISO 294-4
Water Absorption				ISO 62
Saturated, 23°C	5.5	--	%	ISO 62
Equilibrium, 23°C, 50% RH	1.9	--	%	ISO 62
Hardness	Dry	Conditioned	Unit	Test Method
Ball Indentation Hardness	230	130	MPa	ISO 2039-1
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus				
23°C	10300	6790	MPa	ASTM D638
23°C	9500	6000	MPa	ISO 527-2/1
Tensile Strength				
Fracture, 23°C	179	125	MPa	ASTM D638
Fracture, 23°C	185	115	MPa	ISO 527-2/5
Tensile Elongation				
Fracture, 23°C	3.0	6.0	%	ASTM D638
Fracture, 23°C	3.5	6.5	%	ISO 527-2/5
Flexural Modulus				
23°C	8400	5900	MPa	ASTM D790

23°C ⁵	9200	5500	MPa	ISO 178/A
Flexural Strength				
23°C	290	200	MPa	ASTM D790
3.5% strain ⁶	260	145	MPa	ISO 178/A
23°C ⁷	280	185	MPa	ISO 178
Flexural Strain at Flexural Strength ⁸ (23°C)	4.2	6.0	%	
Burning Behavior ⁹	passed	--		ISO 3795
ISO Shortname	PA 66, GHR, 14-090, GF30	--		ISO 1874
Residual Moisture Content	0.030 - 0.12		%	Karl Fisher
Films	Dry	Conditioned	Unit	Test Method
Film Puncture Energy				ISO 6603-2
-- ¹⁰	1.90	--	J	ISO 6603-2
-- ¹¹	2.50	4.20	J	ISO 6603-2
Film Puncture Force				ISO 6603-2
-- ¹²	800	--	N	ISO 6603-2
-- ¹³	1000	1100	N	ISO 6603-2
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	10	15	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	60	60	kJ/m ²	ISO 179/1eU
23°C	75	90	kJ/m ²	ISO 179/1eU
Notched Izod Impact				ISO 180/1A
-30°C	< 10	< 10	kJ/m ²	ISO 180/1A
23°C	10	15	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength				ISO 180/1U
-30°C	55	55	kJ/m ²	ISO 180/1U
23°C	65	70	kJ/m ²	ISO 180/1U
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	240	--	°C	ISO 75-2/A
8.0 MPa, not annealed	185	--	°C	ISO 75-2/C
Vicat Softening Temperature				
	> 230	--	°C	ISO 306/B50, ISO 306/B120
Melting Temperature ¹⁴	262	--	°C	ISO 11357-3
Linear thermal expansion coefficient				ISO 11359-2

Flow: 23 to 55°C	3.0E-5	--	cm/cm/°C	ISO 11359-2
Lateral: 23 to 55°C	9.0E-5	--	cm/cm/°C	ISO 11359-2
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	1.0E+14	--	ohms	IEC 60093
Volume Resistivity (23°C)	1.0E+15	--	ohms·cm	IEC 60093
Dielectric Strength (23°C, 1.00 mm)	40	--	kV/mm	IEC 60243-1
Relative Permittivity				IEC 60250
23°C, 100 Hz	4.50	--		IEC 60250
23°C, 1 MHz	4.00	--		IEC 60250
Dissipation Factor				IEC 60250
23°C, 100 Hz	0.010	--		IEC 60250
23°C, 1 MHz	0.018	--		IEC 60250
Comparative Tracking Index (Solution A)	525	--	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				IEC 60695-2-12
0.800 mm	700	--	°C	IEC 60695-2-12
1.60 mm	700	--	°C	IEC 60695-2-12
3.00 mm	700	--	°C	IEC 60695-2-12
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.	60x60x2; MT 80°C; 600 Bar			
2.	60x60x2			
3.	60x60x2; MT 80°C; 600 Bar			
4.	60x60x2			
5.	2.0 mm/min			
6.	2.0 mm/min			
7.	2.0 mm/min			
8.	Pull Rate: 2 mm/min; 50% RH			
9.	US-FMVSS302			
10.	-30°C			
11.	23°C			
12.	-30°C			

13.	23°C
14.	10°C/min

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