

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,30% Filler by Weight		
Additive		Heat Stabilizer		
Features		Heat Stabilized		
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 : 300°C, 2.00 mm ¹	1.1	--	%	
Across Flow : 120°C, 4 hr, 2.00 mm ²	0.10	--	%	
Flow : 300°C, 2.00 mm ³	0.40	--	%	
Flow : 120°C, 4 hr, 2.00 mm ⁴	0.040	--	%	
Water Absorption				ISO 62
Saturation, 23°C	5.5	--	%	
Equilibrium, 23°C, 50% RH	1.9	--	%	
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				
Break, 23°C	179	125	MPa	ASTM D638
Break, 23°C	185	115	MPa	ISO 527-2/5
Tensile Elongation				
Break, 23°C	3.0	6.0	%	ASTM D638
Break, 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, 23°C	260	145	MPa	ISO 178/A
23°C ⁶	280	185	MPa	ISO 178/A
Flexural Strain at Flexural Strength ⁷ (23°C)	4.2	6.0	%	ISO 178/A
Burning Behavior ⁸	passed	--		ISO 3795
ISO Shortname	PA 66, GHR, 14-090, 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
-30°C	10	10	kJ/m ²	
23°C	10	15	kJ/m ²	
Charpy Unnotched Impact Strength				
				ISO 179/1eU
-30°C	60	60	kJ/m ²	
23°C	75	90	kJ/m ²	
Notched Izod Impact Strength				
				ISO 180/1A
-30°C	< 10	< 10	kJ/m ²	
23°C	10	15	kJ/m ²	
Unnotched Izod Impact Strength				
				ISO 180/1U
-30°C	55	55	kJ/m ²	
23°C	65	70	kJ/m ²	
Multi-Axial Instrumented Impact Energy				
				ISO 6603-2
-30°C	1.90	--	J	
23°C	2.50	4.20	J	
Multi-Axial Instrumented Impact Peak Force				
				ISO 6603-2
-30°C	800	--	N	
23°C	1000	1100	N	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	> 250	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	240	--	°C	ISO 75-2/A
8.0 MPa, Unannealed	185	--	°C	ISO 75-2/C
Vicat Softening Temperature				
	> 230	--	°C	ISO 306/B50, 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+14	--	ohms	IEC 60093
Volume Resistivity (23°C)	1.0E+15	--	ohms·cm	IEC 60093
Electric Strength (23°C, 1.00 mm)	40	--	kV/mm	IEC 60243-1
Relative Permittivity				IEC 60250
23°C, 100 Hz	4.50	--		
23°C, 1 MHz	4.00	--		
Dissipation Factor				IEC 60250
23°C, 100 Hz	0.010	--		
23°C, 1 MHz	0.018	--		
Comparative Tracking Index (Solution A)	525	--	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				IEC 60695-2-12
0.800 mm	700	--	°C	
1.60 mm	700	--	°C	
3.00 mm	700	--	°C	
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			

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