

Durethan® AKV 50 H3.0 000000

Polyamide 66

LANXESS GmbH

Message:

PA 66, 50 % glass fibers, injection molding, heat-aging stabilized

General Information			
UL YellowCard	E245249-473559		
Filler / Reinforcement	Glass fiber reinforced material, 50% filler by weight		
Additive	heat stabilizer		
Features	Good heat aging resistance		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density (23°C)	1.57	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	0.93	%	ISO 294-4
Vertical flow direction: 120°C, 2 hours, 2.00mm ²	0.090	%	ISO 294-4
Flow direction: 300°C, 2.00mm ³	0.37	%	ISO 294-4
Flow direction: 120°C, 2 hours, 2.00mm ⁴	0.050	%	ISO 294-4
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	16000	MPa	ISO 527-2/1
Tensile Stress (Break, 23°C)	230	MPa	ISO 527-2/5
Tensile Strain (Break, 23°C)	2.5	%	ISO 527-2/5
Flexural Modulus ⁵ (23°C)	15300	MPa	ISO 178/A
Flexural Stress ⁶ (23°C)	360	MPa	ISO 178
Flexural Strain at Flexural Strength ⁷ (23°C)	3.0	%	
ISO Shortname	PA 66, GHR, 14-160, GF50		ISO 1874
Residual Moisture Content	0.030 - 0.12	%	Karl Fisher
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-40°C	14	kJ/m ²	ISO 179/1eA
-30°C	15	kJ/m ²	ISO 179/1eA
23°C	17	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	100	kJ/m ²	ISO 179/1eU
23°C	100	kJ/m ²	ISO 179/1eU
Notched Izod Impact			ISO 180/1A
-30°C	13	kJ/m ²	ISO 180/1A

23°C	15	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength			ISO 180/1U
-30°C	90	kJ/m ²	ISO 180/1U
23°C	90	kJ/m ²	ISO 180/1U
Thermal	Nominal Value	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
Melting Temperature ⁸	262	°C	ISO 11357-3
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+16	ohms	IEC 60093
Volume Resistivity (23°C)	1.0E+15	ohms·cm	IEC 60093
Dielectric Strength (23°C, 1.00 mm)	38	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
23°C, 100 Hz	5.00		IEC 60250
23°C, 1 MHz	4.40		IEC 60250
Dissipation Factor			IEC 60250
23°C, 100 Hz	0.025		IEC 60250
23°C, 1 MHz	0.023		IEC 60250
Comparative Tracking Index (Solution A)	500	V	IEC 60112
Injection	Nominal Value	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.	Pull Rate: 2 mm/min; 50% RH		
8.	10°C/min		

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

