

Durethan® AKV 30 HR H2.0 900116

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 reinforced material, 30% filler by weight		
Additive		Hydrolysis resistance		
		heat stabilizer		
Features		Thermal Stability		
		Hydrolysis stability		
Agency Ratings		EC 1907/2006 (REACH)		
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
Vertical flow direction: 280°C, 3.00mm ¹	1.3	--	%	ISO 2577
Vertical flow direction: 120°C, 4 hours, 3.00mm ²	0.070	--	%	ISO 2577
Flow direction: 290°C, 3.00mm ³	0.35	--	%	ISO 2577
Flow direction: 120°C, 4 hours, 3.00mm ⁴	0.040	--	%	ISO 2577
Water Absorption				ISO 62
Saturated, 23°C	5.5	--	%	ISO 62
Equilibrium, 23°C, 50% RH	2.0	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	9500	6100	MPa	ISO 527-2/1
Tensile Stress (Break, 23°C)	180	120	MPa	ISO 527-2/5
Tensile Strain (Break, 23°C)	4.0	8.0	%	ISO 527-2/5
Flexural Modulus ⁵ (23°C)	8400	5400	MPa	ISO 178/A
Flexural Stress				ISO 178/A
3.5% strain, 23°C	255	150	MPa	ISO 178/A
23°C ⁶	260	180	MPa	ISO 178/A

Flexural Strain at Flexural Strength ⁷ (23°C)	4.5	6.5	%	ISO 178/A
Burning Behavior ⁸	passed	--		ISO 3795
ISO Shortname	PA 66, GHWR, 14-090, GF30	--		ISO 1874
Residual Moisture Content	0.030 - 0.12		%	Karl Fisher
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	10	20	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	65	75	kJ/m ²	ISO 179/1eU
23°C	75	90	kJ/m ²	ISO 179/1eU
Notched Izod Impact				ISO 180/1A
-40°C	< 10	< 10	kJ/m ²	ISO 180/1A
-30°C	< 10	< 10	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength				ISO 180/1U
-30°C	60	--	kJ/m ²	ISO 180/1U
23°C	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	245	--	°C	ISO 75-2/A
8.0 MPa, not annealed	125	--	°C	ISO 75-2/C
Vicat Softening Temperature	> 230	--	°C	ISO 306/B120
Melting Temperature ⁹	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+15	1.0E+13	ohms	IEC 60093
Volume Resistivity (23°C)	1.0E+15	1.0E+11	ohms·cm	IEC 60093
Dielectric 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		IEC 60250
23°C, 1 MHz	3.60	4.50		IEC 60250
Dissipation Factor				IEC 60250
23°C, 100 Hz	8.0E-3	0.30		IEC 60250

23°C, 1 MHz	0.016	0.090		IEC 60250
Comparative Tracking Index (Solution A)	450	--	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 ¹⁰	25	--	%	ISO 4589-2
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				

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|-----|-------------------------------|
| 1. | 150x105x3mm, 80°C MT, 500 bar |
| 2. | 150x105x3mm |
| 3. | 150x105x3mm, 80°C MT, 500 bar |
| 4. | 150x105x3mm |
| 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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