Durethan® AKV 30 000000

Polyamide 66

LANXESS GmbH

Message:

PA 66, 30 % glass fibers, injection molding

General Information				
UL YellowCard	E245249-473556			
Filler / Reinforcement	Glass fiber reinforced material, 30% filler by weight			
Agency Ratings	EC 1907/2006 (REACH)			
Forms	Particle			
Processing Method	Injection molding			
Physical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Density (23°C)	1.36	--	g/cm³	ISO 1183
Apparent Density	0.70	--	g/cm³	ISO 60
Molding Shrinkage				
Vertical flow direction: 280°C, 3.00mm [1]	1.5	--	%	ISO 2577
Vertical flow direction: 120°C, 2 hours, 3.00mm [2]	0.050	--	%	ISO 294-4
Flow direction: 280°C, 3.00mm [3]	0.35	--	%	ISO 2577
Flow direction: 120°C, 2 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
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	10600	7000	MPa	ISO 527-2/1
Tensile Strength				
Fracture, 23°C	179	121	MPa	ASTM D638
Fracture, 23°C	185	125	MPa	ISO 527-2/5
Tensile Elongation (Break, 23°C)	3.0	6.0	%	ASTM D638, ISO 527-2/5
Flexural Modulus				
23°C	841	590	MPa	ASTM D790
23°C [5]	8400	5900	MPa	ISO 178/A

Flexural Strength				
23°C	290	200	MPa	ASTM D790
3.5% strain [6]	--	165	MPa	ISO 178/A
23°C [7]	290	200	MPa	ISO 178
Flexural Strain at Flexural Strength [8] (23°C)	4.0	6.0	%	
ISO Shortname	PA 66, GR, 14-110, 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
-30°C	10	10	kJ/m²	ISO 179/1eA
23°C	10	15	kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	70	70	kJ/m²	ISO 179/1eU
23°C	90	90	kJ/m²	ISO 179/1eU
Notched Izod Impact				ISO 180/1A
-40°C	< 10	< 10	kJ/m²	ISO 180/1A
-30°C	< 10	< 10	kJ/m²	ISO 180/1A
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	250	--	°C	ISO 75-2/A
8.0 MPa, not annealed	135	--	°C	ISO 75-2/C
Vicat Softening Temperature	> 230	--	°C	ISO 306/B120
Melting Temperature [9]	263	--	°C	ISO 11357-3
Linear thermal expansion coefficient				ISO 11359-2
Flow: 23 to 55°C	2.5E-5	--	cm/cm/°C	ISO 11359-2
Lateral: 23 to 55°C	1.0E-4	--	cm/cm/°C	ISO 11359-2
Electrical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Surface Resistivity	1.0E+14	1.0E+13	ohms	IEC 60093
Volume Resistivity (23°C)	1.0E+15	1.0E+12	ohms·cm	IEC 60093
Dielectric Strength (23°C, 1.00 mm)	40	35	kV/mm	IEC 60243-1
Relative Permittivity				IEC 60250
23°C, 100 Hz	4.00	10.0		IEC 60250
23°C, 1 MHz	4.00	4.00		IEC 60250
Dissipation Factor				IEC 60250
23°C, 100 Hz	9.0E-3	0.27		IEC 60250
23°C, 1 MHz	0.018	0.080		IEC 60250

Comparative Tracking Index (Solution A)	600	--	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)	600	--	°C	IEC 60695-2-12
Oxygen Index [10]	23	--	%	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				
1.	150x150x3; MT 80°C; 400 Bar			
2.	150x150x3			
3.	150x150x3; MT 80°C; 400 Bar			
4.	150x150x3			
5.	2.0 mm/min			
6.	2.0 mm/min			
7.	2.0 mm/min			
8.	Pull Rate: 2 mm/min; 50% RH			
9.	10°C/min			
10.	Procedure A			

Recommended distributors for this material

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