Durethan® AKV 50 H2.0 901510

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,50% Filler by Weight
Additive	Heat Stabilizer
Features	Heat Stabilized
Processing Method	Injection Molding
Multi-Point Data	Isothermal Stress vs. Strain (ISO 11403-1) Secant Modulus vs. Strain (ISO 11403-1) Viscosity vs. Shear Rate (ISO 11403-2)

Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.57	--	g/cm³	ISO 1183
Apparent Density	0.70	--	g/cm³	ISO 60
Molding Shrinkage				ISO 2577
Across Flow : 300°C, 3.00 mm [1]	0.90	--	%	
Across Flow : 120°C, 4 hr, 3.00 mm [2]	0.040	--	%	
Flow : 300°C, 3.00 mm [3]	0.23	--	%	
Flow : 120°C, 4 hr, 3.00 mm [4]	0.020	--	%	
Water Absorption				ISO 62
Saturation, 23°C	4.0	--	%	
Equilibrium, 23°C, 50% RH	1.4	--	%	
Hardness	**Dry**	**Conditioned**	**Unit**	**Test Method**
Ball Indentation Hardness	246	140	MPa	ISO 2039-1
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile Modulus (23°C)	16000	10200	MPa	ISO 527-2/1
Tensile Stress (Break, 23°C)	230	155	MPa	ISO 527-2/5
Tensile Strain (Break, 23°C)	2.6	4.3	%	ISO 527-2/5
Flexural Modulus [5] (23°C)	14000	10000	MPa	ISO 178/A
Flexural Stress				ISO 178/A
3.5% Strain,23°C	--	216	MPa	
23°C [6]	360	240	MPa	

Flexural Strain at Flexural Strength [7] (23°C)	3.0	4.8	%	ISO 178/A
Burning Behavior [8] (> 1.00 mm)	passed	--		ISO 3795
ISO Shortname	PA 66, GHR, 14-160, GF50	--		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	12	15	kJ/m²	
23°C	15	23	kJ/m²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	100	100	kJ/m²	
23°C	95	--	kJ/m²	
Notched Izod Impact Strength				ISO 180/1A
-30°C	12	12	kJ/m²	
23°C	15	20	kJ/m²	
Unnotched Izod Impact Strength				ISO 180/1U
-30°C	85	80	kJ/m²	
23°C	85	85	kJ/m²	
Multi-Axial Instrumented Impact Energy				ISO 6603-2
-30°C	2.80	--	J	
23°C	3.60	5.00	J	
Multi-Axial Instrumented Impact Peak Force				ISO 6603-2
-30°C	1050	--	N	
23°C	1160	1200	N	
Thermal	**Dry**	**Conditioned**	**Unit**	**Test Method**
Heat Deflection Temperature				
0.45 MPa, Unannealed	250	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	250	--	°C	ISO 75-2/A
Vicat Softening Temperature	> 230	--	°C	ISO 306/B50, ISO 306/B120
Ball Pressure Test (258°C)	Pass	--		IEC 60695-10-2
Melting Temperature [9]	261	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow : 23 to 55°C	2.0E-5	--	cm/cm/°C	
Transverse : 23 to 55°C	8.0E-5	--	cm/cm/°C	
Electrical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Surface Resistivity	1.0E+13	1.0E+12	ohms	IEC 60093

Volume Resistivity (23°C)	1.0E+15	1.0E+14	ohms·cm	IEC 60093
Electric Strength (23°C, 1.00 mm)	40	35	kV/mm	IEC 60243-1
Relative Permittivity				IEC 60250
23°C, 100 Hz	4.50	14.0		
23°C, 1 MHz	4.00	5.00		
Dissipation Factor				IEC 60250
23°C, 100 Hz	9.0E-3	0.32		
23°C, 1 MHz	0.015	0.085		
Comparative Tracking Index (Solution A)	550	--	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 (2.00 mm)	600	--	°C	IEC 60695-2-12
Oxygen Index [10]	27	--	%	ISO 4589-2
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.	150x105x3mm, 80°C MT, 400 bar			
2.	150x105x3mm			
3.	150x105x3mm, 80°C MT, 400 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			

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

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