Durethan® AKV 25 FN 00 000000

Polyamide 66

LANXESS GmbH

Message:

PA 66, 25 % glass, injection molding, halogen free flame retardant

General Information	
Filler / Reinforcement	Glass fiber reinforced material, 25% filler by weight
Additive	Flame retardancy
Features	Halogen-free Flame retardancy
Processing Method	Injection molding
Resin ID (ISO 1043)	PA GF FR (30+40)

Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.39	--	g/cm³	ISO 1183
Apparent Density	0.70	--	g/cm³	ISO 60
Melt Volume-Flow Rate (MVR) (270°C/2.16 kg)	12.0	--	cm³/10min	ISO 1133
Molding Shrinkage				ISO 2577
Vertical flow direction: 270°C, 2.00mm [1]	0.90	--	%	ISO 2577
Vertical flow direction: 120°C, 4 hours, 2.00mm [2]	0.10	--	%	ISO 2577
Flow direction: 270°C, 2.00mm [3]	0.30	--	%	ISO 2577
Flow direction: 120°C, 4 hours, 2.00mm [4]	0.10	--	%	ISO 2577
Water Absorption				ISO 62
Saturated, 23°C	4.6	--	%	ISO 62
Equilibrium, 23°C, 50% RH	1.5	--	%	ISO 62

Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	9600	5800	MPa	ISO 527-2/1
Tensile Stress (Break, 23°C)	125	80.0	MPa	ISO 527-2/5
Tensile Strain (Break, 23°C)	3.0	6.0	%	ISO 527-2/5
Nominal Tensile Strain at Break (23°C)	3.4	--	%	ISO 527-2/50
Flexural Modulus [5] (23°C)	9100	5700	MPa	ISO 178/A
Flexural Stress				ISO 178/A
3.5% strain, 23°C	--	120	MPa	ISO 178/A
23°C [6]	210	135	MPa	ISO 178/A

Flexural Strain at Flexural Strength [7] (23°C)	3.3	5.8	%	ISO 178/A
ISO Shortname	PA 66, GFHR, 14-100, GF25	--		ISO 1874
Residual Moisture Content	0.030 - 0.070		%	Karl Fisher
Impact	**Dry**	**Conditioned**	**Unit**	**Test Method**
Charpy Notched Impact Strength (23°C)	< 10	< 10	kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	60	60	kJ/m²	ISO 179/1eU
23°C	60	65	kJ/m²	ISO 179/1eU
Notched Izod Impact (23°C)	< 10	< 10	kJ/m²	ISO 180/1A
Unnotched Izod Impact Strength (23°C)	55	65	kJ/m²	ISO 180/1U
Thermal	**Dry**	**Conditioned**	**Unit**	**Test Method**
Heat Deflection Temperature (1.8 MPa, Unannealed)	225	--	°C	ISO 75-2/A
Vicat Softening Temperature	225	--	°C	ISO 306/B120
Ball Pressure Test (228°C)	Pass	--		IEC 60695-10-2
Melting Temperature [8]	260	--	°C	ISO 11357-3
Electrical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Surface Resistivity	1.1E+16	--	ohms	IEC 60167
Volume Resistivity (23°C)	7.4E+15	--	ohms·cm	IEC 60093
Dielectric Strength (23°C, 1.00 mm)	35	--	kV/mm	IEC 60243-1
Comparative Tracking Index (CTI)	PLC 0	--		UL 746
Comparative Tracking Index (Solution A)	600	--	V	IEC 60112
Flammability	**Dry**	**Conditioned**	**Unit**	**Test Method**
Flame Rating				UL 94
0.400 mm	V-0	--		UL 94
0.750 mm	V-0	--		UL 94
1.50 mm	V-0	--		UL 94
3.00 mm	V-0	--		UL 94
Glow Wire Flammability Index				IEC 60695-2-12
0.400 mm	960	--	°C	IEC 60695-2-12
0.800 mm	960	--	°C	IEC 60695-2-12
1.50 mm	960	--	°C	IEC 60695-2-12
3.00 mm	960	--	°C	IEC 60695-2-12
Glow Wire Ignition Temperature				IEC 60695-2-13

0.400 mm	775	--	°C	IEC 60695-2-13
0.750 mm	775	--	°C	IEC 60695-2-13
1.50 mm	775	--	°C	IEC 60695-2-13
3.00 mm	775	--	°C	IEC 60695-2-13
Oxygen Index [9]	38	--	%	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	265 - 285		°C
Mold Temperature	80.0 - 100		°C

NOTE	
1.	60x60x2mm, 120°C MT, 600 bar
2.	60x60x2mm
3.	60x60x2mm, 120°C MT, 600 bar
4.	60x60x2mm
5.	2.0 mm/min
6.	2.0 mm/min
7.	2 mm/min
8.	10°C/min
9.	Procedure A

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