

Durethan® BKV 35 000000

Polyamide 6

LANXESS GmbH

Message:

PA 6, 35 % glass fibers, injection molding

General Information				
Filler / Reinforcement		Glass Fiber,35% Filler by Weight		
Processing Method		Injection Molding		
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.41	--	g/cm ³	ISO 1183
Apparent Density	0.70	--	g/cm ³	ISO 60
Molding Shrinkage				ISO 2577
Across Flow : 280°C, 2.00 mm ¹	0.70	--	%	
Across Flow : 120°C, 4 hr, 2.00 mm ²	0.14	--	%	
Flow : 280°C, 2.00 mm ³	0.23	--	%	
Flow : 120°C, 4 hr, 2.00 mm ⁴	0.070	--	%	
Water Absorption				ISO 62
Saturation, 23°C	6.5	--	%	
Equilibrium, 23°C, 50% RH	1.9	--	%	
Hardness	Dry	Conditioned	Unit	Test Method
Ball Indentation Hardness	230	120	MPa	ISO 2039-1
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	10700	6800	MPa	ISO 527-2/1
Tensile Stress (Break, 23°C)	180	110	MPa	ISO 527-2/5
Tensile Strain (Break, 23°C)	3.0	5.0	%	ISO 527-2/5
Tensile Creep Modulus				ISO 899-1
1 hr	--	6000	MPa	
1000 hr	--	4900	MPa	
Flexural Modulus ⁵ (23°C)	10700	5900	MPa	ISO 178/A
Flexural Stress				ISO 178/A
3.5% Strain,23°C	280	160	MPa	
23°C ⁶	290	180	MPa	
Flexural Strain at Flexural Strength ⁷ (23°C)	4.0	5.0	%	ISO 178/A
Burning Behavior ⁸ (> 1.00 mm)	passed	--		ISO 3795
ISO Shortname	PA 6, GR, 14-110, GF35	--		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	< 10	10	kJ/m ²	
23°C	12	20	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	70	70	kJ/m ²	
23°C	80	90	kJ/m ²	
Notched Izod Impact Strength				ISO 180/1A
-30°C	< 10	10	kJ/m ²	
23°C	15	20	kJ/m ²	
Unnotched Izod Impact Strength				ISO 180/1U
-30°C	70	65	kJ/m ²	
23°C	75	85	kJ/m ²	
Multi-Axial Instrumented Impact Energy				ISO 6603-2
-30°C	3.30	--	J	
23°C	3.90	--	J	
Multi-Axial Instrumented Impact Peak Force				ISO 6603-2
-30°C	945	--	N	
23°C	1060	--	N	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	215	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	205	--	°C	ISO 75-2/A
8.0 MPa, Unannealed	150	--	°C	ISO 75-2/C
Vicat Softening Temperature				
--	200	--	°C	ISO 306/B50
--	> 200	--	°C	ISO 306/B120
Melting Temperature ⁹	222	--	°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+14	1.0E+12	ohms	IEC 60093
Volume Resistivity (23°C)	1.0E+15	1.0E+12	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	4.00	1.50		
23°C, 1 MHz	4.00	5.00		
Dissipation Factor				IEC 60250
23°C, 100 Hz	7.0E-3	0.20		
23°C, 1 MHz	0.015	0.12		
Comparative Tracking Index (Solution A)	525	--	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)	650	--	°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 to 6.0			hr
Processing (Melt) Temp	270 to 290			°C
Mold Temperature	80.0 to 120			°C
NOTE				
1.	60x60x2mm, 80°C MT, 600 bar			
2.	60x60x2mm			
3.	60x60x2mm, 80°C MT, 600 bar			
4.	60x60x2mm			
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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