

Durethan® BKV 215 000000

Polyamide Copolymer

LANXESS GmbH

Message:

PA 6-Copolymer, 15 % glass fibers, injection molding, improved impact strength

General Information				
Filler / Reinforcement	Glass Fiber,15% Filler by Weight			
Features	Good Impact Resistance			
Processing Method	Injection Molding			
Multi-Point Data	Shear Modulus vs. Temperature (ISO 11403-1)			
	Viscosity vs. Shear Rate (ISO 11403-2)			

Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.18	--	g/cm ³	ISO 1183
Apparent Density	0.60	--	g/cm ³	ISO 60
Molding Shrinkage				ISO 2577
Across Flow : 280°C, 2.00 mm ¹	0.61	--	%	
Across Flow : 120°C, 4 hr, 2.00 mm ²	0.15	--	%	
Flow : 280°C, 2.00 mm ³	0.59	--	%	
Flow : 120°C, 4 hr, 2.00 mm ⁴	0.14	--	%	
Water Absorption				ISO 62
Saturation, 23°C	7.0	--	%	
Equilibrium, 23°C, 50% RH	2.0	--	%	

Hardness	Dry	Conditioned	Unit	Test Method
Ball Indentation Hardness	110	55.0	MPa	ISO 2039-1

Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	4500	2400	MPa	ISO 527-2/1
Tensile Stress (Break, 23°C)	85.0	55.0	MPa	ISO 527-2/5
Tensile Strain (Break, 23°C)	4.5	15	%	ISO 527-2/5
Flexural Modulus ⁵ (23°C)	4000	2200	MPa	ISO 178/A
Flexural Stress				ISO 178/A
3.5% Strain,23°C	125	60.0	MPa	
23°C ⁶	130	80.0	MPa	
Flexural Strain at Flexural Strength ⁷ (23°C)	5.0	7.0	%	ISO 178/A
Burning Behavior ⁸	passed	--		ISO 3795
ISO Shortname	PA 6/66HI, GR, 14-040, GF15	--		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	12	kJ/m ²	
23°C	20	35	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	80	75	kJ/m ²	
23°C	70	80	kJ/m ²	
Notched Izod Impact Strength				ISO 180/1A
-30°C	10	10	kJ/m ²	
23°C	18	30	kJ/m ²	
Multi-Axial Instrumented Impact Energy				ISO 6603-2
-30°C	4.80	--	J	
23°C	13.0	32.0	J	
Multi-Axial Instrumented Impact Peak Force				ISO 6603-2
-30°C	650	--	N	
23°C	1000	--	N	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	205	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	175	--	°C	ISO 75-2/A
8.0 MPa, Unannealed	60.0	--	°C	ISO 75-2/C
Vicat Softening Temperature	200	--	°C	ISO 306/B50, ISO 306/B120
Melting Temperature ⁹	214	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow : 23 to 55°C	4.0E-5	--	cm/cm/°C	
Transverse : 23 to 55°C	1.5E-4	--	cm/cm/°C	
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	1.0E+15	1.0E+13	ohms	IEC 60093
Volume Resistivity (23°C)	1.0E+13	1.0E+12	ohms·cm	IEC 60093
Electric Strength (23°C, 1.00 mm)	43	43	kV/mm	IEC 60243-1
Relative Permittivity				IEC 60250
23°C, 100 Hz	3.50	10.0		
23°C, 1 MHz	3.20	3.70		
Dissipation Factor				IEC 60250
23°C, 100 Hz	6.0E-3	0.15		
23°C, 1 MHz	0.015	0.080		

Comparative Tracking Index (Solution A)	600	--	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	22	--	%	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	260 to 290		°C	
Mold Temperature	80.0 to 100		°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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