

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 reinforced material, 15% filler by weight		
Features		Copolymer Impact resistance, good		
Agency Ratings		EC 1907/2006 (REACH)		
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
Vertical flow direction: 280°C, 2.00mm ¹	0.61	--	%	ISO 2577
Vertical flow direction: 120°C, 4 hours, 2.00mm ²	0.15	--	%	ISO 2577
Flow direction: 280°C, 2.00mm ³	0.59	--	%	ISO 2577
Flow direction: 120°C, 4 hours, 2.00mm ⁴	0.14	--	%	ISO 2577
Water Absorption				ISO 62
Saturated, 23°C	7.0	--	%	ISO 62
Equilibrium, 23°C, 50% RH	2.0	--	%	ISO 62

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	ISO 178/A
23°C ⁶	130	80.0	MPa	ISO 178/A

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 - 0.12		%	Karl Fisher
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	12	12	kJ/m ²	ISO 179/1eA
23°C	20	35	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	80	75	kJ/m ²	ISO 179/1eU
23°C	70	80	kJ/m ²	ISO 179/1eU
Notched Izod Impact				ISO 180/1A
-30°C	10	10	kJ/m ²	ISO 180/1A
23°C	18	30	kJ/m ²	ISO 180/1A
Multi-Axial Instrumented Impact Energy				ISO 6603-2
-30°C	4.80	--	J	ISO 6603-2
23°C	13.0	32.0	J	ISO 6603-2
Multi-Axial Instrumented Impact Peak Force				ISO 6603-2
-30°C	650	--	N	ISO 6603-2
23°C	1000	--	N	ISO 6603-2
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, not annealed	205	--	°C	ISO 75-2/B
1.8 MPa, not annealed	175	--	°C	ISO 75-2/A
8.0 MPa, not annealed	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
Linear thermal expansion coefficient				ISO 11359-2
Flow: 23 to 55°C	4.0E-5	--	cm/cm/°C	ISO 11359-2
Lateral: 23 to 55°C	1.5E-4	--	cm/cm/°C	ISO 11359-2
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
Dielectric 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		IEC 60250

23°C, 1 MHz	3.20	3.70		IEC 60250
Dissipation Factor				IEC 60250
23°C, 100 Hz	6.0E-3	0.15		IEC 60250
23°C, 1 MHz	0.015	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)	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 - 6.0		hr	
Processing (Melt) Temp	260 - 290		°C	
Mold Temperature	80.0 - 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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