

Durethan® BKV 30 H3.0 000000

Polyamide 6
LANXESS GmbH

Message:
PA 6, 30 % glass fibers, injection molding, heat-aging stabilized

General Information		
UL YellowCard	E245249-473587	E245249-473590
Filler / Reinforcement	Glass fiber reinforced material, 30% filler by weight	
Additive	heat stabilizer	
Features	Good heat aging resistance	
Agency Ratings	EC 1907/2006 (REACH)	
Processing Method	Injection molding	
Multi-Point Data	Creep Modulus vs. Time (ISO 11403-1)	
	Isochronous Stress vs. Strain (ISO 11403-1)	
	Isothermal Stress vs. Strain (ISO 11403-1)	
	Secant Modulus vs. Strain (ISO 11403-1)	
	Shear Modulus vs. Temperature (ISO 11403-1)	
	Specific Volume vs Temperature (ISO 11403-2)	
	Viscosity vs. Shear Rate (ISO 11403-2)	

Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.36	--	g/cm ³	ISO 1183
Apparent Density	0.70	--	g/cm ³	ISO 60
Molding Shrinkage				ISO 294-4
Vertical flow direction: 280°C, 2.00mm ¹	0.69	--	%	ISO 294-4
Vertical flow direction: 120°C, 2 hours, 2.00mm ²	0.12	--	%	ISO 294-4
Flow direction: 280°C, 2.00mm ³	0.24	--	%	ISO 294-4
Flow direction: 120°C, 2 hours, 2.00mm ⁴	0.070	--	%	ISO 294-4
Water Absorption				ISO 62
Saturated, 23°C	7.0	--	%	ISO 62
Equilibrium, 23°C, 50% RH	2.1	--	%	ISO 62
Hardness	Dry	Conditioned	Unit	Test Method
Ball Indentation Hardness	210	100	MPa	ISO 2039-1
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	9800	6100	MPa	ISO 527-2/1
Tensile Stress (Break, 23°C)	180	105	MPa	ISO 527-2/5

Tensile Strain (Break, 23°C)	3.0	6.0	%	ISO 527-2/5
Tensile Creep Modulus				ISO 899-1
1 hr	--	5100	MPa	ISO 899-1
1000 hr	--	4100	MPa	ISO 899-1
Flexural Modulus ⁵ (23°C)	8600	5100	MPa	ISO 178/A
Flexural Stress ⁶				
3.5% strain	--	145	MPa	ISO 178/A
23°C	280	170	MPa	ISO 178
Flexural Strain at Flexural Strength ⁷ (23°C)	4.0	6.0	%	
Burning Behavior ⁸	passed	--		ISO 3795
ISO Shortname	PA 6, GHR, 14-100, GF30	--		ISO 1874
Residual Moisture Content	0.030 - 0.12		%	Karl Fisher
Films	Dry	Conditioned	Unit	Test Method
Film Puncture Energy				ISO 6603-2
-- ⁹	6.00	5.00	J	ISO 6603-2
-- ¹⁰	8.00	14.0	J	ISO 6603-2
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	10	10	kJ/m ²	ISO 179/1eA
23°C	15	20	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	70	70	kJ/m ²	ISO 179/1eU
23°C	80	95	kJ/m ²	ISO 179/1eU
Notched Izod Impact				ISO 180/1A
-30°C	10	10	kJ/m ²	ISO 180/1A
23°C	15	20	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength				ISO 180/1U
-30°C	70	80	kJ/m ²	ISO 180/1U
23°C	75	85	kJ/m ²	ISO 180/1U
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, not annealed	215	--	°C	ISO 75-2/B
1.8 MPa, not annealed	200	--	°C	ISO 75-2/A
8.0 MPa, not annealed	110	--	°C	ISO 75-2/C
Vicat Softening Temperature				
--	200	--	°C	ISO 306/B50
--	> 200	--	°C	ISO 306/B120
Melting Temperature ¹¹	222	--	°C	ISO 11357-3

Linear thermal expansion coefficient				ISO 11359-2
Flow: 23 to 55°C	2.0E-5	--	cm/cm/°C	ISO 11359-2
Lateral: 23 to 55°C	8.0E-5	--	cm/cm/°C	ISO 11359-2
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
Dielectric Strength (23°C, 1.00 mm)	40	35	kV/mm	IEC 60243-1
Relative Permittivity				IEC 60250
23°C, 100 Hz	4.00	15.0		IEC 60250
23°C, 1 MHz	4.00	5.00		IEC 60250
Comparative Tracking Index (Solution A)	525	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
--	HB	--		UL 94
1.60 mm	HB	--		UL 94
Glow Wire Flammability Index				IEC 60695-2-12
0.800 mm	700	--	°C	IEC 60695-2-12
1.60 mm	700	--	°C	IEC 60695-2-12
3.00 mm	700	--	°C	IEC 60695-2-12
Oxygen Index ¹²	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	270 - 290		°C	
Mold Temperature	80.0 - 120		°C	
NOTE				
1.	60x60x2; MT 80°C; 600 Bar			
2.	60x60x2			
3.	60x60x2; MT 80°C; 600 Bar			
4.	60x60x2			
5.	2.0 mm/min			
6.	2.0 mm/min			
7.	Pull Rate: 2 mm/min; 50% RH			
8.	US-FMVSS302			
9.	-30°C			
10.	23°C			
11.	10°C/min			
12.	Procedure A			

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