

Durethan® BKV 30 EF 000000

Polyamide 6

LANXESS GmbH

Message:

PA 6, 30 % glass fibers, injection molding, improved flowability

General Information				
UL YellowCard		E245249-473588		
Filler / Reinforcement		Glass fiber reinforced material, 30% filler by weight		
Features		Good liquidity		
Agency Ratings		EC 1907/2006 (REACH)		
Processing Method		Injection molding		
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.35	--	g/cm ³	ISO 1183
Apparent Density	0.60	--	g/cm ³	ISO 60
Molding Shrinkage				ISO 294-4
Vertical flow direction: 260°C, 2.00mm ¹	0.58	--	%	ISO 294-4
Vertical flow direction: 120°C, 2 hours, 2.00mm ²	0.14	--	%	ISO 294-4
Flow direction: 260°C, 2.00mm ³	0.23	--	%	ISO 294-4
Flow direction: 120°C, 2 hours, 2.00mm ⁴	0.050	--	%	ISO 294-4
Hardness	Dry	Conditioned	Unit	Test Method
Ball Indentation Hardness	190	--	MPa	ISO 2039-1
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus				
23°C	9020	5530	MPa	ASTM D638
23°C	9300	5700	MPa	ISO 527-2/1
Tensile Strength				
Fracture, 23°C	174	97.2	MPa	ASTM D638
Fracture, 23°C	180	100	MPa	ISO 527-2/5
Tensile Elongation				
Fracture, 23°C	3.2	5.6	%	ASTM D638
Fracture, 23°C	3.0	6.0	%	ISO 527-2/5
Flexural Modulus				
23°C	7800	5100	MPa	ASTM D790
23°C ⁵	8400	6000	MPa	ISO 178/A
Flexural Strength				
23°C	270	170	MPa	ASTM D790

3.5% strain ⁶	250	155	MPa	ISO 178/A
23°C ⁷	265	180	MPa	ISO 178
Flexural Strain at Flexural Strength ⁸ (23°C)	4.0	5.3	%	
ISO Shortname	PA 6, GR, 10-090, 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	2.80	--	J	ISO 6603-2
-- ¹⁰	2.90	--	J	ISO 6603-2
Film Puncture Force				ISO 6603-2
-- ¹¹	797	--	N	ISO 6603-2
-- ¹²	813	--	N	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	12	18	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	50	45	kJ/m ²	ISO 179/1eU
23°C	65	85	kJ/m ²	ISO 179/1eU
Notched Izod Impact				ISO 180/1A
-30°C	10	10	kJ/m ²	ISO 180/1A
23°C	10	15	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength				ISO 180/1U
-40°C	45	40	kJ/m ²	ISO 180/1U
23°C	60	80	kJ/m ²	ISO 180/1U
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, not annealed	220	--	°C	ISO 75-2/B
1.8 MPa, not annealed	210	--	°C	ISO 75-2/A
8.0 MPa, not annealed	150	--	°C	ISO 75-2/C
Vicat Softening Temperature	210	--	°C	ISO 306/B120
Melting Temperature ¹³	220	--	°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	1.0E-4	--	cm/cm/°C	ISO 11359-2
Electrical	Dry	Conditioned	Unit	Test Method
Comparative Tracking Index (Solution A)	550	--	V	IEC 60112

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	250 - 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.	2.0 mm/min
8.	Pull Rate: 2 mm/min; 50% RH
9.	-30°C
10.	23°C
11.	-30°C
12.	23°C
13.	10°C/min

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