Durethan® BKV 30 G H2.0 900051

Polyamide 6

LANXESS Corporation

Message:

PA 6, 30 % glass fibers, injection molding, heat-aging stabilized, improved surface finish, improved resistance to weathering

General Information				
Filler / Reinforcement	Glass fiber reinforced material, 30% filler by weight			
Additive	heat stabilizer			
Features	Good weather resistance Thermal Stability Excellent appearance			
Agency Ratings	EC 1907/2006 (REACH)			
Processing Method	Injection molding			
Physical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Density (23°C)	1.36	--	g/cm³	ISO 1183
Apparent Density	0.70	--	g/cm³	ISO 60
Molding Shrinkage				ISO 2577
Vertical flow direction: 280°C, 2.00mm [1]	0.58	--	%	ISO 2577
Vertical flow direction: 120°C, 4 hours, 2.00mm [2]	0.16	--	%	ISO 2577
Flow direction: 280°C, 2.00mm [3]	0.27	--	%	ISO 2577
Flow direction: 120°C, 4 hours, 2.00mm [4]	0.060	--	%	ISO 2577
Water Absorption				ISO 62
Saturated, 23°C	6.5	--	%	ISO 62
Equilibrium, 23°C, 50% RH	1.9	--	%	ISO 62
Hardness	**Dry**	**Conditioned**	**Unit**	**Test Method**
Ball Indentation Hardness	230	140	MPa	ISO 2039-1
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile Modulus				
23°C	9910	7090	MPa	ASTM D638
23°C	10000	6200	MPa	ISO 527-2/1
Tensile Strength				
Fracture, 23°C	175	117	MPa	ASTM D638
Fracture, 23°C	180	110	MPa	ISO 527-2/5
Tensile Elongation				
Fracture, 23°C	3.0	6.0	%	ASTM D638

Fracture, 23°C	3.0	7.0	%	ISO 527-2/5
Flexural Modulus				
23°C	9120	6820	MPa	ASTM D790
23°C [5]	9300	5700	MPa	ISO 178/A
Flexural Strength				
23°C	276	200	MPa	ASTM D790
3.5% strain, 23°C	--	145	MPa	ISO 178/A
23°C [6]	270	170	MPa	ISO 178/A
Flexural Strain at Flexural Strength [7] (23°C)	4.0	6.2	%	ISO 178/A
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
Impact	**Dry**	**Conditioned**	**Unit**	**Test Method**
Charpy Notched Impact Strength				ISO 179/1eA
-40°C	< 10	< 10	kJ/m²	ISO 179/1eA
-30°C	< 10	< 10	kJ/m²	ISO 179/1eA
23°C	10	13	kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	60	60	kJ/m²	ISO 179/1eU
23°C	75	75	kJ/m²	ISO 179/1eU
Notched Izod Impact				ISO 180/1A
-40°C	< 10	< 10	kJ/m²	ISO 180/1A
-30°C	< 10	< 10	kJ/m²	ISO 180/1A
Unnotched Izod Impact Strength				ISO 180/1U
-30°C	55	55	kJ/m²	ISO 180/1U
23°C	65	70	kJ/m²	ISO 180/1U
Multi-Axial Instrumented Impact Energy				ISO 6603-2
-30°C	2.20	--	J	ISO 6603-2
23°C	2.60	--	J	ISO 6603-2
Multi-Axial Instrumented Impact Peak Force				ISO 6603-2
-30°C	735	--	N	ISO 6603-2
23°C	838	--	N	ISO 6603-2
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	195	--	°C	ISO 75-2/A
Vicat Softening Temperature	210	--	°C	ISO 306/B50, ISO 306/B120

Melting Temperature [9]	221	--	°C	ISO 11357-3
Linear thermal expansion coefficient				ISO 11359-2
Flow: 23 to 55°C	3.0E-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+15	1.0E+13	ohms	IEC 60093
Volume Resistivity (23°C)	1.0E+15	1.0E+12	ohms·cm	IEC 60093
Dielectric Strength (23°C, 1.00 mm)	34	31	kV/mm	IEC 60243-1
Relative Permittivity				IEC 60250
23°C, 100 Hz	4.30	7.00		IEC 60250
23°C, 1 MHz	4.00	4.30		IEC 60250
Dissipation Factor				IEC 60250
23°C, 100 Hz	8.0E-3	0.13		IEC 60250
23°C, 1 MHz	0.017	0.050		IEC 60250
Comparative Tracking Index				IEC 60112
Solution a	475	--	V	IEC 60112
Solution B	225	--	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)	600	--	°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 - 6.0		hr	
Processing (Melt) Temp	270 - 290		°C	
Mold Temperature	80.0 - 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

Recommended distributors for this material

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