

Durethan® BKV 30 DUS000 000000

Polyamide 6

LANXESS GmbH

Message:

PA 6, 30 % glass fibers, injection molding

General Information				
Filler / Reinforcement		Glass fiber reinforced material, 30% filler by weight		
Processing Method		Injection molding		
Physical	Dry	Conditioned	Unit	Test Method
Specific Gravity				
	1.36			
--	1.36	--	g/cm ³	ASTM D792
23°C	1.36	--	g/cm ³	ISO 1183
Apparent Density	0.70	--	g/cm ³	ISO 60
Melt Volume-Flow Rate (MVR) (260°C/5.0 kg)	14.0	--	cm ³ /10min	ISO 1133
Molding Shrinkage				ISO 2577
Vertical flow direction: 280°C, 3.00mm ¹	0.82	--	%	ISO 2577
Vertical flow direction: 120°C, 4 hours, 3.00mm ²	0.12	--	%	ISO 2577
Flow direction: 280°C, 3.00mm ³	0.16	--	%	ISO 2577
Flow direction: 120°C, 4 hours, 3.00mm ⁴	0.030	--	%	ISO 2577
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 ⁵	9200	5600	MPa	ASTM D638
23°C	9800	6100	MPa	ISO 527-2/1
Tensile Strength				
Fracture, 23°C	180	100	MPa	ASTM D638
Fracture, 23°C	180	105	MPa	ISO 527-2/5
Tensile Elongation (Break, 23°C)	3.0	6.0	%	ASTM D638, 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				
23°C	8270	5000	MPa	ASTM D790
23°C ⁶	8600	5100	MPa	ISO 178/A
Flexural Strength				
23°C	280	170	MPa	ASTM D790
3.5% strain, 23°C	--	145	MPa	ISO 178/A
23°C ⁷	280	170	MPa	ISO 178/A
Flexural Strain at Flexural Strength ⁸ (23°C)	4.0	6.0	%	ISO 178/A
Burning Behavior ⁹ (> 1.00 mm)	passed	--		ISO 3795
ISO Shortname	PA 6, GR, 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
-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				
-40°C, 3.18 mm	100	100	J/m	ASTM D256
23°C, 3.18 mm	120	150	J/m	ASTM D256
-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	60	70	kJ/m ²	ISO 180/1U
23°C	75	80	kJ/m ²	ISO 180/1U
Multi-Axial Instrumented Impact Energy				ISO 6603-2
-30°C	6.00	5.00	J	ISO 6603-2
23°C	8.00	14.0	J	ISO 6603-2
Multi-Axial Instrumented Impact Peak Force				ISO 6603-2
-30°C	950	--	N	ISO 6603-2
23°C	1070	--	N	ISO 6603-2
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load				

0.45 MPa, unannealed, 39.9mm	215	--	°C	ASTM D648
0.45 MPa, not annealed	215	--	°C	ISO 75-2/B
1.8 MPa, not annealed	200	--	°C	ISO 75-2/A
1.8 MPa, annealing, 3.99mm	200	--	°C	ASTM D648
Vicat Softening Temperature				
--	200	--	°C	ISO 306/B50
--	> 200	--	°C	ISO 306/B120
Melting Temperature ¹⁰	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
RTI Elec (1.50 mm)	130	--	°C	UL 746
RTI Imp				UL 746
0.830 mm	95.0	--	°C	UL 746
1.50 mm	95.0	--	°C	UL 746
RTI				UL 746
0.830 mm	130	--	°C	UL 746
1.50 mm	130	--	°C	UL 746
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				IEC 60243-1
23°C, 1.00 mm	40	35	kV/mm	IEC 60243-1
23°C, 3.00 mm	40	35	kV/mm	IEC 60243-1
Dielectric Constant				
23°C, 50 Hz ¹¹	4.00	15.0		IEC 60250
23°C, 1 MHz ¹²	4.00	5.00		IEC 60250
23°C, 100 Hz	4.00	10.0		IEC 60250
Dissipation Factor				IEC 60250
23°C, 50 Hz	5.0E-3	0.50		IEC 60250
23°C, 100 Hz	5.0E-3	0.20		IEC 60250
	0.015	0.12		
23°C, 1 MHz	0.015	0.16		IEC 60250
Arc Resistance ¹³	--	76.0	sec	ASTM D495
Comparative Tracking Index				
Solution a	600	--	V	IEC 60112
Solution B	400	--	V	IEC 60112
--	--	400	V	ASTM D3638

Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.830 mm	HB	--		UL 94
1.50 mm	HB	--		UL 94
1.60 mm	HB	--		UL 94
3.00 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 ¹⁴	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. 150x105x3mm, 80°C MT, 500 bar
2. 150x105x3mm
3. 150x105x3mm, 80°C MT, 500 bar
4. 150x105x3mm
5. 1.0 mm/min
6. 2.0 mm/min
7. 2.0 mm/min
8. 2 mm/min
9. US-FMVSS302
10. 10°C/min
11. Tinfoil Electrodes
12. Tinfoil Electrodes
13. Tungsten Electrodes
14. Procedure A

The information and data on this page are provided by manufacturers and document providers. SHANGHAI SUSHENG assumes no legal liability. It is strongly recommended to verify all technical data with material suppliers before final material selection. All rights belong to the original authors. If any infringement occurs, please contact us immediately.

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China



WECHAT