

Durethan® BKV 50 H2.0 901510

Polyamide 6

LANXESS GmbH

Message:

PA 6, 50 % glass fibers, injection molding, heat-aging stabilized

General Information				
UL YellowCard		E245249-473600		
Filler / Reinforcement		Glass Fiber,50% Filler by Weight		
Additive		Heat Stabilizer		
Features		Heat Stabilized		
Processing Method		Injection Molding		
Physical	Dry	Conditioned	Unit	Test Method
Specific Gravity				
	1.57			
--	1.58	--	g/cm ³	ASTM D792
23°C	1.57	--	g/cm ³	ISO 1183
Apparent Density	0.70	--	g/cm ³	ISO 60
Molding Shrinkage				ISO 2577
Across Flow : 280°C, 3.00 mm ¹	0.85	--	%	
Across Flow : 120°C, 4 hr, 3.00 mm ²	0.050	--	%	
Flow : 280°C, 3.00 mm ³	0.16	--	%	
Flow : 120°C, 4 hr, 3.00 mm ⁴	0.020	--	%	
Water Absorption				ISO 62
Saturation, 23°C	5.0	--	%	
Equilibrium, 23°C, 50% RH	1.5	--	%	
Hardness	Dry	Conditioned	Unit	Test Method
Ball Indentation Hardness	250	109	MPa	ISO 2039-1
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus				
23°C ⁵	15000	9500	MPa	ASTM D638
23°C	16300	9800	MPa	ISO 527-2/1
Tensile Strength				
Break, 23°C	210	150	MPa	ASTM D638
Break, 23°C	220	140	MPa	ISO 527-2/5
Tensile Elongation				

Break, 23°C	2.0	4.0	%	ASTM D638
Break, 23°C	3.0	5.0	%	ISO 527-2/5
Tensile Creep Modulus				ISO 899-1
1 hr	--	8100	MPa	
1000 hr	--	6600	MPa	
Flexural Modulus				
23°C	13500	7690	MPa	ASTM D790
23°C ⁶	15100	9700	MPa	ISO 178/A
Flexural Strength				
23°C	350	220	MPa	ASTM D790
23°C ⁷	360	230	MPa	ISO 178/A
Flexural Strain at Flexural Strength ⁸ (23°C)	3.0	5.0	%	ISO 178/A
Burning Behavior ⁹ (> 1.00 mm)	passed	--		ISO 3795
ISO Shortname	PA 6, GHR, 14-160, GF50	--		ISO 1874
Residual Moisture Content	0.030 to 0.12		%	Karl Fisher
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	15	13	kJ/m ²	
23°C	20	25	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	85	80	kJ/m ²	
23°C	100	100	kJ/m ²	
Notched Izod Impact				
-40°C, 3.18 mm	130	130	J/m	ASTM D256
23°C, 3.18 mm	170	200	J/m	ASTM D256
-30°C	12	12	kJ/m ²	ISO 180/1A
23°C	20	25	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength				ISO 180/1U
-30°C	80	80	kJ/m ²	
23°C	85	85	kJ/m ²	
Multi-Axial Instrumented Impact Energy				ISO 6603-2
-30°C	3.70	--	J	
23°C	4.20	8.90	J	
Multi-Axial Instrumented Impact Peak Force				ISO 6603-2
-30°C	1060	--	N	
23°C	1200	--	N	
Thermal	Dry	Conditioned	Unit	Test Method

Deflection Temperature Under Load				
0.45 MPa, Unannealed, 39.9 mm	215	--	°C	ASTM D648
0.45 MPa, Unannealed	215	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	205	--	°C	ISO 75-2/A
1.8 MPa, Annealed, 3.99 mm	200	--	°C	ASTM D648
Vicat Softening Temperature	> 200	--	°C	ISO 306/B50, ISO 306/B120
Melting Temperature ¹⁰	222	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow : 23 to 55°C	2.0E-5	--	cm/cm/°C	
Transverse : 23 to 55°C	7.0E-5	--	cm/cm/°C	
RTI Elec				UL 746
0.750 mm	65.0	--	°C	
1.50 mm	120	--	°C	
RTI Imp				UL 746
0.750 mm	65.0	--	°C	
1.50 mm	95.0	--	°C	
RTI Str				UL 746
0.750 mm	65.0	--	°C	
1.50 mm	140	--	°C	
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	1.0E+13 to 1.0E+14	1.0E+12 to 1.0E+13	ohms	IEC 60093
Volume Resistivity (23°C)	1.0E+15 to 1.0E+16	1.0E+12 to 1.0E+13	ohms·cm	IEC 60093
Electric Strength				IEC 60243-1
23°C, 1.00 mm	35	26	kV/mm	
23°C, 3.00 mm	40	35	kV/mm	
Dielectric Constant				IEC 60250
23°C, 50 Hz ¹¹	4.00	--		
23°C, 1 MHz ¹²	4.00	5.00		
23°C, 100 Hz	5.30	14.2		
23°C, 1 MHz	4.30	5.00		
Dissipation Factor				IEC 60250
23°C, 50 Hz	0.010	--		
23°C, 100 Hz	0.036	0.32		
	0.024	0.089		
23°C, 1 MHz	0.015	0.14		
Comparative Tracking Index				
Solution A	550	--	V	IEC 60112
--	--	375	V	ASTM D3638

Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.750 mm	HB	--		
1.50 mm	HB	--		
1.60 mm	HB	--		
3.00 mm	HB	--		
3.20 mm	HB	--		
Glow Wire Flammability Index (2.00 mm)	650	--	°C	IEC 60695-2-12
Oxygen Index ¹³	24	--	%	ISO 4589-2
Injection	Dry	Unit	Test Method	
Drying Temperature - Dry Air Dryer	80.0		°C	
Drying Time - Dry Air Dryer	2.0 to 6.0		hr	
Processing (Melt) Temp	270 to 290		°C	
Mold Temperature	80.0 to 120		°C	

NOTE

- 150x105x3mm, 80°C MT, 400 bar
- 150x105x3mm
- 150x105x3mm, 80°C MT, 400 bar
- 150x105x3mm
- 1.0 mm/min
- 2.0 mm/min
- 2.0 mm/min
- 2 mm/min
- US-FMVSS302
- 10°C/min
- Tinfoil Electrodes
- Tinfoil Electrodes
- Procedure A

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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



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