

Durethan® BKV 30 H2.0 901510

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,30% Filler by Weight		
Additive		Heat Stabilizer		
Features		Heat Stabilized		
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
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
Molding Shrinkage				ISO 2577
Across Flow : 280°C, 2.00 mm ¹	0.69	--	%	
Across Flow : 120°C, 4 hr, 2.00 mm ²	0.13	--	%	
Flow : 280°C, 2.00 mm ³	0.30	--	%	
Flow : 120°C, 4 hr, 2.00 mm ⁴	0.060	--	%	
Water Absorption				ISO 62
Saturation, 23°C	7.0	--	%	
Equilibrium, 23°C, 50% RH	2.1	--	%	
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	9500	5800	MPa	ISO 527-2/1
Tensile Strength				
Break, 23°C	180	100	MPa	ASTM D638
Break, 23°C	170	100	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	
1000 hr	--	4100	MPa	
Flexural Modulus				
23°C	8300	5000	MPa	ASTM D790
23°C ⁶	9300	5000	MPa	ISO 178/A
Flexural Strength				
23°C	280	170	MPa	ASTM D790
3.5% Strain, 23°C	260	140	MPa	ISO 178/A
23°C ⁷	270	160	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, GHR, 14-090, GF30	--		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	< 10	10	kJ/m ²	
23°C	10	20	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	65	60	kJ/m ²	
23°C	75	90	kJ/m ²	
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	10	20	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength				ISO 180/1U
-30°C	60	55	kJ/m ²	
23°C	65	80	kJ/m ²	

Multi-Axial Instrumented Impact Energy				ISO 6603-2
-30°C	3.00	--	J	
23°C	3.00	6.00	J	
Multi-Axial Instrumented Impact Peak Force				ISO 6603-2
-30°C	860	--	N	
23°C	1000	1230	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	200	--	°C	ISO 75-2/A
1.8 MPa, Annealed, 3.99 mm	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
CLTE				ISO 11359-2
Flow : 23 to 55°C	2.0E-5	--	cm/cm/°C	
Transverse : 23 to 55°C	1.0E-4	--	cm/cm/°C	
RTI Elec				UL 746
0.830 mm	120	--	°C	
1.50 mm	120	--	°C	
RTI Imp				UL 746
0.830 mm	90.0	--	°C	
1.50 mm	95.0	--	°C	
RTI Str				UL 746
0.830 mm	130	--	°C	
1.50 mm	130	--	°C	
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	1.0E+14	1.0E+12 to 1.0E+13	ohms	IEC 60093
Volume Resistivity (23°C)	1.0E+15	1.0E+12	ohms·cm	IEC 60093
Electric Strength				IEC 60243-1
23°C, 1.00 mm	35	30	kV/mm	
23°C, 3.00 mm	40	35	kV/mm	
Dielectric Constant				IEC 60250
23°C, 50 Hz ¹¹	4.00	15.0		
23°C, 1 MHz ¹²	4.00	5.00		
23°C, 100 Hz	4.20	12.0		

23°C, 1 MHz	3.80	4.40		
Dissipation Factor				IEC 60250
23°C, 50 Hz	5.0E-3	0.50		
23°C, 100 Hz	0.010	0.26		
	0.017	0.078		
23°C, 1 MHz	0.015	0.16		
Arc Resistance ¹³	--	76.0	sec	ASTM D495
Comparative Tracking Index				
Solution A	425	--	V	IEC 60112
--	--	400	V	ASTM D3638
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.830 mm	HB	--		
1.50 mm	HB	--		
1.60 mm	HB	--		
3.00 mm	HB	--		
3.20 mm	HB	--		
Glow Wire Flammability Index (1.50 mm)	700	--	°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 to 6.0		hr	
Processing (Melt) Temp	270 to 290		°C	
Mold Temperature	80.0 to 120		°C	
NOTE				
1.	60x60x2mm, 80°C MT, 600 bar			
2.	60x60x2mm			
3.	60x60x2mm, 80°C MT, 600 bar			
4.	60x60x2mm			
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			

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

