

Durethan® BKV 20 FN20 000000

Polyamide 6

LANXESS GmbH

Message:

PA 6, 20 % glass fibers, injection molding, halogen free flame retardant

General Information				
UL YellowCard		E245249-100074961		
Filler / Reinforcement		Glass Fiber,20% Filler by Weight		
Additive		Flame Retardant		
Features		Flame Retardant		
		Halogen Free		
Processing Method		Injection Molding		
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.31	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 2577
Across Flow : 260°C, 2.00 mm ¹	0.70	--	%	
Across Flow : 120°C, 4 hr, 2.00 mm ²	0.10	--	%	
Flow : 260°C, 2.00 mm ³	0.60	--	%	
Flow : 120°C, 4 hr, 2.00 mm ⁴	0.10	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	6100	3100	MPa	ISO 527-2/1
Tensile Stress (Break, 23°C)	100	55.0	MPa	ISO 527-2/5
Tensile Strain (Break, 23°C)	3.0	15	%	ISO 527-2/5
Flexural Modulus ⁵ (23°C)	6100	3200	MPa	ISO 178/A
Flexural Stress				ISO 178/A
3.5% Strain,23°C	165	75.0	MPa	
23°C ⁶	170	90.0	MPa	
Flexural Strain at Flexural Strength ⁷ (23°C)	4.5	7.0	%	ISO 178/A
ISO Shortname	PA 6, GFHR, 12-060, GF20; ISO 4043-PA GF FR (30)			ISO 1874
Residual Moisture Content	0.030 to 0.070		%	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	< 10	kJ/m ²	

Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	30	--	kJ/m ²	
23°C	35	100	kJ/m ²	
Notched Izod Impact Strength				ISO 180/1A
-30°C	< 10	< 10	kJ/m ²	
23°C	< 10	11	kJ/m ²	
Unnotched Izod Impact Strength (23°C)				ISO 180/1U
30		85	kJ/m ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	215	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	185	--	°C	ISO 75-2/A
Vicat Softening Temperature	205	--	°C	ISO 306/B120
Ball Pressure Test (212°C)	Pass	--		IEC 60695-10-2
Melting Temperature ⁸	222	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow : 23 to 55°C	4.0E-5	--	cm/cm/°C	
Transverse : 23 to 55°C	9.0E-5	--	cm/cm/°C	
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	5.0E+14	--	ohms	IEC 60167
Volume Resistivity (23°C)	6.0E+15	--	ohms · cm	IEC 60093
Electric Strength (23°C, 1.00 mm)	32	--	kV/mm	IEC 60243-1
Comparative Tracking Index (CTI)	PLC 1	--		UL 746
Comparative Tracking Index (Solution A)	525	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.750 mm	V-2	--		
1.50 mm	V-2	--		
3.00 mm	V-2	--		
Glow Wire Flammability Index				IEC 60695-2-12
0.750 mm	960	--	°C	
1.50 mm	960	--	°C	
3.00 mm	960	--	°C	
Glow Wire Ignition Temperature				IEC 60695-2-13
0.750 mm	775	--	°C	
1.50 mm	775	--	°C	

3.00 mm	775	--	°C	
Oxygen Index ⁹	27	--	%	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	250 to 270		°C	
Mold Temperature	80.0 to 100		°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. | 10°C/min |
| 9. | 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

