

Durethan® ECO BKV 20 FN20 000000

Polyamide 6
LANXESS GmbH

Message:
PA 6, 20 % glass, injection molding, halogen free flame retardant, contains at least 15 % pre-consumer-recyclate

General Information				
Filler / Reinforcement		Glass fiber reinforced material, 20% filler by weight		
Additive		Flame retardancy		
Recycled Content		Yes, 15%		
Features		Halogen-free		
		Flame retardancy		
Processing Method		Injection molding		
Resin ID (ISO 1043)		PA G FR (30)		
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.31	--	g/cm ³	ISO 1183
Apparent Density	0.70	--	g/cm ³	ISO 60
Molding Shrinkage				ISO 2577
Vertical flow direction: 260°C, 2.00mm ¹	0.80	--	%	ISO 2577
Vertical flow direction: 120°C, 4 hours, 2.00mm ²	0.20	--	%	ISO 2577
Flow direction: 260°C, 2.00mm ³	0.80	--	%	ISO 2577
Flow direction: 120°C, 4 hours, 2.00mm ⁴	0.20	--	%	ISO 2577
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	5400	2300	MPa	ISO 527-2/1
Tensile Stress (Break, 23°C)	76.0	40.0	MPa	ISO 527-2/5
Tensile Strain (Break, 23°C)	3.0	27	%	ISO 527-2/5
Flexural Modulus ⁵ (23°C)	5300	2300	MPa	ISO 178/A
Flexural Stress				ISO 178/A
3.5% strain, 23°C	135	50.0	MPa	ISO 178/A
23°C ⁶	140	62.0	MPa	ISO 178/A
Flexural Strain at Flexural Strength ⁷ (23°C)	3.8	7.0	%	ISO 178/A
ISO Shortname	PA 6, GFHR, 12-050, G20	--		ISO 1874
Admissible Residence Time at Tmax			min	
Residual Moisture Content	0.030 - 0.070		%	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	< 10	< 10	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)				ISO 179/1eU
	35	75	kJ/m ²	
Notched Izod Impact				ISO 180/1A
-30°C	< 10	< 10	kJ/m ²	ISO 180/1A
23°C	< 10	< 10	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength (23°C)				ISO 180/1U
	30	65	kJ/m ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, not annealed	210	--	°C	ISO 75-2/B
1.8 MPa, not annealed	155	--	°C	ISO 75-2/A
Vicat Softening Temperature				
	205	--	°C	ISO 306/B120
Ball Pressure Test (209°C)				IEC 60695-10-2
	Pass	--		
Melting Temperature ⁸				ISO 11357-3
	222	--	°C	
Linear thermal expansion coefficient				ISO 11359-2
Flow: 23 to 55°C	5.0E-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
Dielectric Strength (23°C, 1.00 mm)				
	32	--	kV/mm	IEC 60243-1
Comparative Tracking Index (CTI)				UL 746
	PLC 0	--		
Comparative Tracking Index (Solution A)				IEC 60112
	600	--	V	
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.750 mm	V-2	--		UL 94
1.50 mm	V-2	--		UL 94
3.00 mm	V-2	--		UL 94
Glow Wire Flammability Index				IEC 60695-2-12
0.800 mm	960	--	°C	IEC 60695-2-12
1.50 mm	960	--	°C	IEC 60695-2-12
3.00 mm	960	--	°C	IEC 60695-2-12
Oxygen Index ⁹				ISO 4589-2
	30	--	%	
Injection	Dry	Unit	Test Method	
Drying Temperature - Dry Air Dryer				°C
	80.0			
Drying Time - Dry Air Dryer				hr
	2.0 - 6.0			

Processing (Melt) Temp	250 - 270	°C
Mold Temperature	80.0 - 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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