

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,20% Filler by Weight		
Additive		Flame Retardant		
Recycled Content		Yes		
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
Apparent Density	0.70	--	g/cm ³	ISO 60
Molding Shrinkage				ISO 2577
Across Flow : 260°C, 2.00 mm ¹	0.80	--	%	
Across Flow : 120°C, 4 hr, 2.00 mm ²	0.20	--	%	
Flow : 260°C, 2.00 mm ³	0.80	--	%	
Flow : 120°C, 4 hr, 2.00 mm ⁴	0.20	--	%	
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	
23°C ⁶	140	62.0	MPa	
Flexural Strain at Flexural Strength ⁷ (23°C)	3.8	7.0	%	ISO 178/A
ISO Shortname	PA 6, GFHR, 12-050, G20; ISO 1043-PA G FR (30)			ISO 1874
Admissible Residence Time at Tmax	< 5.0		min	
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 (23°C)	35	75	kJ/m ²	ISO 179/1eU
Notched Izod Impact Strength				ISO 180/1A
-30°C	< 10	< 10	kJ/m ²	
23°C	< 10	< 10	kJ/m ²	
Unnotched Izod Impact Strength (23°C)	30	65	kJ/m ²	ISO 180/1U
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	210	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	155	--	°C	ISO 75-2/A
Vicat Softening Temperature	205	--	°C	ISO 306/B120
Ball Pressure Test (209°C)	Pass	--		IEC 60695-10-2
Melting Temperature ⁸	222	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow : 23 to 55°C	5.0E-5	--	cm/cm/°C	
Transverse : 23 to 55°C	8.0E-5	--	cm/cm/°C	
Electrical	Dry	Conditioned	Unit	Test Method
Electric Strength (23°C, 1.00 mm)	32	--	kV/mm	IEC 60243-1
Comparative Tracking Index (CTI)	PLC 0	--		UL 746
Comparative Tracking Index (Solution A)	600	--	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
0.800 mm	960	--	°C	
1.50 mm	960	--	°C	
3.00 mm	960	--	°C	
Oxygen Index ⁹	30	--	%	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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