

Durethan® B 30 S F30 000000

Polyamide 6

LANXESS GmbH

Message:

PA 6, non-reinforced, injection molding, flame retardant

General Information			
UL YellowCard	E245249-100654671		
Additive	Flame retardancy		
Features	Flame retardancy		
Processing Method	Injection molding		
Resin ID (ISO 1043)	PA FR (17)		
Physical	Nominal Value	Unit	Test Method
Density (23°C)	1.35	g/cm ³	ISO 1183
Molding Shrinkage			ISO 2577
Vertical flow direction: 260°C, 2.00mm ¹	1.1	%	ISO 2577
Vertical flow direction: 120°C, 4 hours, 2.00mm ²	0.40	%	ISO 2577
Flow direction: 260°C, 2.00mm ³	1.1	%	ISO 2577
Flow direction: 120°C, 4 hours, 2.00mm ⁴	0.40	%	ISO 2577
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	3600	MPa	ISO 527-2/1
Tensile Stress (Yield, 23°C)	70.0	MPa	ISO 527-2/50
Tensile Strain (Yield, 23°C)	3.7	%	ISO 527-2/50
Nominal Tensile Strain at Break (23°C)	9.0	%	ISO 527-2/50
Flexural Modulus ⁵ (23°C)	3200	MPa	ISO 178/A
Flexural Stress			ISO 178/A
3.5% strain, 23°C	100	MPa	ISO 178/A
23°C ⁶	110	MPa	ISO 178/A
Flexural Strain at Flexural Strength ⁷ (23°C)	5.5	%	ISO 178/A
ISO Shortname	PA 6, GFHR, 14-040		ISO 1874
Admissible Residence Time at Tmax	> 10.0	min	
Residual Moisture Content	0.030 - 0.12	%	Karl Fisher
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	< 10	kJ/m ²	ISO 179/1eA
23°C	< 10	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	130	kJ/m ²	ISO 179/1eU
23°C	150	kJ/m ²	ISO 179/1eU

Notched Izod Impact			ISO 180/1A
-30°C	< 10	kJ/m ²	ISO 180/1A
23°C	< 10	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength			ISO 180/1U
-30°C	100	kJ/m ²	ISO 180/1U
23°C	120	kJ/m ²	ISO 180/1U
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)	70.0	°C	ISO 75-2/A
Melting Temperature ⁸	222	°C	ISO 11357-3
Electrical	Nominal Value	Unit	Test Method
Comparative Tracking Index (Solution A)	300	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.400 mm	V-0		UL 94
0.750 mm	V-0		UL 94
1.50 mm	V-0		UL 94
2.00 mm	5VA		UL 94
3.00 mm	5VA		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
Glow Wire Ignition Temperature			IEC 60695-2-13
0.750 mm	825	°C	IEC 60695-2-13
1.50 mm	825	°C	IEC 60695-2-13
3.00 mm	800	°C	IEC 60695-2-13
Injection	Nominal Value	Unit	Test Method
Drying Temperature - Dry Air Dryer	80.0	°C	
Drying Time - Dry Air Dryer	2.0 - 6.0	hr	
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		

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