

Lanxess Durethan® B 30 S FN40 000000 Nylon 6 (PA6), Dry


Categories: [Polymer](#); [Thermoplastic](#); [Nylon \(Polyamide PA\)](#); [Nylon 6 \(PA6\)](#); [Nylon 6, Unreinforced](#)

Material Notes: PA 6, non-reinforced, injection molding, halogen free flame retardant




Information provided by Lanxess.


Vendors: No vendors are listed for this material. Please [click here](#) if you are a supplier and would like information on how to add your listing to this material.

Physical Properties	Metric	English	Comments
Bulk Density	0.700 g/cc	0.0253 lb/in ³	ISO 60
Density	1.14 g/cc	0.0412 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	3.00 %	3.00 %	50% RH; ISO 62
Water Absorption at Saturation	10.0 %	10.0 %	ISO 62
Linear Mold Shrinkage, Flow	0.00900 cm/cm	0.00900 in/in	150x105x3; 260 °C / MT 80 °C; 500 bar; ISO 294-4
	0.00900 cm/cm	0.00900 in/in	60x60x2; 260 °C / MT 80°C; 600 bar; ISO 294-4
Linear Mold Shrinkage, Transverse	0.00900 cm/cm	0.00900 in/in	150x105x3; 260 °C / MT 80 °C; 500 bar; ISO 294-4
	0.00900 cm/cm	0.00900 in/in	60x60x2; 260 °C / MT 80°C; 600 bar; ISO 294-4

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	135 MPa	19600 psi	ISO 2093-1
Tensile Strength at Break	60.0 MPa	8700 psi	5 mm/min; ISO 527-1,-2
Tensile Strength, Yield	90.0 MPa	13100 psi	50 mm/min; ISO 527-1,-2
Elongation at Break	9.60 %	9.60 %	50 mm/min, Nominal; ISO 527-1,-2
	15.5 %	15.5 %	5 mm/min; ISO 527-1,-2
Elongation at Yield	4.00 %	4.00 %	50 mm/min; ISO 527-1,-2
Tensile Modulus	3.40 GPa	493 ksi	1 mm/min; ISO 527-1,-2
Flexural Strength	120 MPa	17400 psi	2 mm/min; ISO 178-A
Flexural Yield Strength	135 MPa	19600 psi	2 mm/min; ISO 178-A
	@Strain 3.50 %	@Strain 3.50 %	
Flexural Modulus	3.00 GPa	435 ksi	2 mm/min; ISO 178-A
Flexural Strain at Break	5.90 %	5.90 %	2 mm/min; ISO 178-A
Izod Impact, Notched (ISO) 	<= 10.0 kJ/m ²	<= 4.76 ft-lb/in ²	ISO 180-1A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	<= 10.0 kJ/m ²	<= 4.76 ft-lb/in ²	ISO 180-1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Unnotched (ISO)	NB	NB	ISO 180-1U
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact Unnotched	NB	NB	ISO 179-1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Electrical Properties	Metric	English	Comments
Comparative Tracking Index	600 V	600 V	Solution A; IEC 60112

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	90.0 µm/m-°C	50.0 µin/in-°F	ISO 11359-1,-2
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	
CTE, linear, Transverse to Flow	80.0 µm/m-°C	44.4 µin/in-°F	ISO 11359-1,-2
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	
Melting Point	222 °C	432 °F	10°C/min; ISO 11357-1,-3
Deflection Temperature at 0.46 MPa (66 psi)	166 °C	331 °F	ISO 75-1,-2
Deflection Temperature at 1.8 MPa (264 psi)	66.0 °C	151 °F	ISO 75-1,-2
Flammability, UL94	V-2	V-2	
	@Thickness 0.750 mm	@Thickness 0.0295 in	
Oxygen Index	28.0 %	28.0 %	Method A; ISO 4589-2
Glow Wire Ignition Temperature 	750 °C	1380 °F	IEC 60695-2-13
	@Thickness 3.00 mm	@Thickness 0.118 in	
	850 °C	1560 °F	IEC 60695-2-13
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	875 °C	1610 °F	IEC 60695-2-13
	@Thickness 0.800 mm	@Thickness 0.0315 in	
Glow Wire Flammability Index 	960 °C	1760 °F	IEC 60695-2-12
	@Thickness 0.800 mm	@Thickness 0.0315 in	
	960 °C	1760 °F	IEC 60695-2-12
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	960 °C	1760 °F	IEC 60695-2-12
	@Thickness 3.00 mm	@Thickness 0.118 in	
Shrinkage, MD 	0.200 %	0.200 %	Post-Shrinkage Flow Direction 150x105x3; ISO 294-4
	@Treatment Temp. 120 °C, Time 14400 sec	@Treatment Temp. 248 °F, Time 4.00 hour	

	0.300 % @Treatment Temp. 120 °C, Time 14400 sec	0.300 % @Treatment Temp. 248 °F, Time 4.00 hour	Post-Shrinkage Flow Direction; 60x60x2; ISO 294-4
Shrinkage, TD 	0.200 % @Treatment Temp. 120 °C, Time 14400 sec	0.200 % @Treatment Temp. 248 °F, Time 4.00 hour	150x105x3; ISO 294-4
	0.300 % @Treatment Temp. 120 °C, Time 14400 sec	0.300 % @Treatment Temp. 248 °F, Time 4.00 hour	60x60x2; ISO 294-4

Processing Properties	Metric	English	Comments
Melt Temperature	260 °C 250 - 270 °C	500 °F 482 - 518 °F	injection molding; ISO 294
Mold Temperature	80.0 °C 80.0 - 100 °C	176 °F 176 - 212 °F	injection molding; ISO 294
Drying Temperature	80.0 °C	176 °F	
Dry Time	2.00 - 6.00 hour	2.00 - 6.00 hour	
Moisture Content	0.0300 - 0.0700 %	0.0300 - 0.0700 %	Karl Fischer

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