

## Lanxess Durethan® BC 30 S 000000 Nylon 6

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6 , Unreinforced

### Material Notes:

PA 6, non-reinforced, injection molding Information provided by LANXESS.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Lanxess-Durethan-BC-30-S-000000-Nylon-6.php](http://www.lookpolymers.com/polymer_Lanxess-Durethan-BC-30-S-000000-Nylon-6.php)

Physical Properties	Metric	English	Comments
Density	1.122 g/cc	0.04053 lb/in <sup>3</sup>	ISO 1183
Linear Mold Shrinkage, Flow	0.010 cm/cm	0.010 in/in	60x60x2; 270°C / MT 80°C; 600 bar; ISO 294-4
Linear Mold Shrinkage, Transverse	0.0090 cm/cm	0.0090 in/in	60x60x2; 270°C / MT 80°C; 600 bar; ISO 294-4

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	45.0 MPa	6530 psi	at yield, conditioned, 50 mm/min; ISO 527-1,-2
	80.0 MPa	11600 psi	at yield, 50 mm/min; ISO 527-1,-2
Elongation at Yield	4.0 %	4.0 %	50 mm/min; ISO 527-1,-2
	24 %	24 %	conditioned, 50 mm/min; ISO 527-1,-2
Tensile Modulus	1.00 GPa	145 ksi	conditioned, 1 mm/min; ISO 527-1,-2
	3.20 GPa	464 ksi	1 mm/min; ISO 527-1,-2
Flexural Strength	40.0 MPa	5800 psi	conditioned, 2 mm/min; ISO 178-A
	105 MPa	15200 psi	2 mm/min; ISO 178-A
Flexural Modulus	1.00 GPa	145 ksi	conditioned, 2 mm/min; ISO 178-A
	2.80 GPa	406 ksi	2 mm/min; ISO 178-A
Izod Impact, Notched (ISO)	<= 10.0 kJ/m <sup>2</sup>	<= 4.76 ft-lb/in <sup>2</sup>	ISO 180-1A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	<= 10.0 kJ/m <sup>2</sup>	<= 4.76 ft-lb/in <sup>2</sup>	ISO 180-1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	<= 10.0 kJ/m <sup>2</sup>	<= 4.76 ft-lb/in <sup>2</sup>	conditioned; ISO 180-1A
	@Temperature -30.0	@Temperature -22.0	

Mechanical Properties	°C Metric	°F English	Comments
	20.0 kJ/m <sup>2</sup> @Temperature 23.0 °C	9.52 ft-lb/in <sup>2</sup> @Temperature 73.4 °F	conditioned; ISO 180-1A
Izod Impact, Unnotched (ISO)	200 kJ/m <sup>2</sup> @Temperature -30.0 °C	95.2 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	ISO 180-1U
Charpy Impact, Notched	<= 1.00 J/cm <sup>2</sup> @Temperature 23.0 °C	<= 4.76 ft-lb/in <sup>2</sup> @Temperature 73.4 °F	ISO 179-1eA
	<= 1.00 J/cm <sup>2</sup> @Temperature -30.0 °C	<= 4.76 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	ISO 179-1eA
	<= 1.00 J/cm <sup>2</sup> @Temperature -30.0 °C	<= 4.76 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	conditioned; ISO 179-1eA
	3.00 J/cm <sup>2</sup> @Temperature 23.0 °C	14.3 ft-lb/in <sup>2</sup> @Temperature 73.4 °F	conditioned; ISO 179-1eA
Puncture Energy	25.0 J @Temperature -30.0 °C	18.4 ft-lb @Temperature -22.0 °F	ISO 6603-2
	55.0 J @Temperature 23.0 °C	40.6 ft-lb @Temperature 73.4 °F	ISO 6603-2

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	100 Åµm/m-Å°C @Temperature 23.0 - 55.0 Å°C	55.6 Åµin/in-Å°F @Temperature 73.4 - 131 Å°F	ISO 11359-1,-2
CTE, linear, Transverse to Flow	80.0 Åµm/m-Å°C @Temperature 23.0 - 55.0 Å°C	44.4 Åµin/in-Å°F @Temperature 73.4 - 131 Å°F	ISO 11359-1,-2
Melting Point	221 Å°C	430 Å°F	10 Å°C/min; ISO 11357-1,-3
Deflection Temperature at 0.46 MPa (66 psi)	172 Å°C	342 Å°F	ISO 75-1,-2
Deflection Temperature at 1.8 MPa (264 psi)	66.0 Å°C	151 Å°F	ISO 75-1,-2

Thermal Properties	0.300 % Metric	0.300 % English	Comments
Shrinkage	@Temperature 120 Â°C, Time 14400 sec	@Temperature 248 Â°F, Time 4.00 hour	post-shrinkage, 60x60x2, ISO 294-4
	0.300 %  @Temperature 120 Â°C, Time 14400 sec	0.300 %  @Temperature 248 Â°F, Time 4.00 hour	post-shrinkage, transverse, 60x60x2; ISO 294-4

Processing Properties	Metric	English	Comments
Melt Temperature	270 Â°C	518 Â°F	Injection molding; ISO 294
Mold Temperature	80.0 Â°C	176 Â°F	Injection molding; ISO 294
Dry Time	2.00 - 6.00 hour  @Temperature 80.0 Â°C	2.00 - 6.00 hour  @Temperature 176 Â°F	
Moisture Content	0.030 - 0.12 %	0.030 - 0.12 %	residual; Karl Fischer test

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