

## Lanxess Durethan® B 31 SK 000000 Nylon 6

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

### Material Notes:

PA 6, injection molding grade, non-reinforced, easy flow, easy-release, rapid solidification, crystallizes somewhat more finely and uniformly than B 30 S

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Lanxess-Durethan-B-31-SK-000000-Nylon-6.php](http://www.lookpolymers.com/polymer_Lanxess-Durethan-B-31-SK-000000-Nylon-6.php)

Physical Properties	Metric	English	Comments
Density	1.14 g/cc	0.0412 lb/in <sup>3</sup>	ISO 1183
Water Absorption	10 %	10 %	Test Sim. to ISO 62
Moisture Absorption at Equilibrium	3.0 %	3.0 %	23 <sup>o</sup> C/50% R.H.; Test Sim. to ISO 62
Viscosity Test	138 cm <sup>3</sup> /g	138 cm <sup>3</sup> /g	Viscosity number; ISO 307, 1157, 1628
Melt Flow	99 g/10 min @Load 5.00 kg, Temperature 260 <sup>o</sup> C	99 g/10 min @Load 11.0 lb, Temperature 500 <sup>o</sup> F	Calculated from MVR using melt density; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	50.0 MPa	7250 psi	Conditioned; ISO 527-1/-2
	85.0 MPa	12300 psi	ISO 527-1/-2
Elongation at Break	10 %	10 %	Nominal; ISO 527-1/-2
	>= 50 %	>= 50 %	Nominal, Conditioned; ISO 527-1/-2
Elongation at Yield	4.0 %	4.0 %	ISO 527-1/-2
	20 %	20 %	Conditioned; ISO 527-1/-2
Tensile Modulus	1.10 GPa	160 ksi	Conditioned; ISO 527-1/-2
	3.50 GPa	508 ksi	ISO 527-1/-2
Charpy Impact Unnotched	NB @Temperature -30.0 <sup>o</sup> C	NB @Temperature -22.0 <sup>o</sup> F	ISO 179/1eU
	NB @Temperature -30.0 <sup>o</sup> C	NB @Temperature -22.0 <sup>o</sup> F	Conditioned; ISO 179/1eU
	NB	NB	

Mechanical Properties	Metric	English	Comments
	@Temperature 23.0 °C	@Temperature 73.4 °F	ISO 179/1eU
	NB	NB	Conditioned; ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	<= 1.00 J/cm <sup>2</sup>	<= 4.76 ft-lb/in <sup>2</sup>	ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	<= 1.00 J/cm <sup>2</sup>	<= 4.76 ft-lb/in <sup>2</sup>	Conditioned; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	<= 1.00 J/cm <sup>2</sup>	<= 4.76 ft-lb/in <sup>2</sup>	ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	2.50 J/cm <sup>2</sup>	11.9 ft-lb/in <sup>2</sup>	Conditioned; ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Impact	4647	4647	Puncture maximum force (N); ISO 6603-2
	6813	6813	Puncture maximum force (N); ISO 6603-2
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Puncture Energy	46.0 J	33.9 ft-lb	ISO 6603-2
	70.0 J	51.6 ft-lb	ISO 6603-2
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	70.0 J	51.6 ft-lb	Conditioned; ISO 6603-2
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Tensile Creep Modulus, 1 hour	900 MPa	131000 psi	ISO 899-1
Tensile Creep Modulus, 1000 hours	700 MPa	102000 psi	ISO 899-1

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	70.0 Åµm/m-Å°C	38.9 Åµin/in-Å°F	ISO 11359-1/-2
CTE, linear, Transverse to Flow	90.0 Åµm/m-Å°C	50.0 Åµin/in-Å°F	ISO 11359-1/-2
Melting Point	222 Å°C	432 Å°F	10Å°C/min; ISO 11357-1/-3

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)			
Deflection Temperature at 1.8 MPa (264 psi)	60.0 Â°C	140 Â°F	ISO 75-1/-2
Deflection Temperature at 8.0 MPa	50.0 Â°C	122 Â°F	ISO 75-1/-2
Vicat Softening Point	200 Â°C	392 Â°F	50Â°C/h 50N; ISO 306
Flammability, UL94	V-2	V-2	IEC 60695-11-10
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	V-2	V-2	IEC 60695-11-10
	@Thickness 3.20 mm	@Thickness 0.126 in	
Oxygen Index	25 %	25 %	ISO 4589-1/-2

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+12 ohm-cm	1.00e+12 ohm-cm	Conditioned; IEC 60093
	1.00e+15 ohm-cm	1.00e+15 ohm-cm	IEC 60093
Surface Resistance	1.00e+14 ohm	1.00e+14 ohm	IEC 60093
Dielectric Constant	3.5	3.5	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	4.0	4.0	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	4.0	4.0	Conditioned; IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Strength	13	13	Conditioned; IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	30.0 kV/mm	762 kV/in	IEC 60243-1
	30.0 kV/mm	762 kV/in	Conditioned; IEC 60243-1
Dissipation Factor	0.0060	0.0060	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.020	0.020	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

Electrical Properties	0.10 Metric	0.10 English	Comments
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	Conditioned; IEC 60250
	0.19	0.19	Conditioned; IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Comparative Tracking Index	600 V	600 V	IEC 60112

Descriptive Properties	Value	Comments
Form	Pellets	
ISO Shortname	ISO 1874-PA 6,MR,14-030,N	
Processing	Injection molding	
Region	Asia Pacific	
	Europe	
	Near East/Africa	
	North America	
	South and Central America	

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