

Lanxess Durethan® BC 30 00000 Nylon 6

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

Material Notes:

PA 6, injection molding grade, non-reinforced, rapid processing, higher notched impact strength than B 30 S / B 31 SK in dry and conditioned state, impact-modified

Order this product through the following link:

http://www.lookpolymers.com/polymer_Lanxess-Durethan-BC-30-00000-Nylon-6.php

Physical Properties	Metric	English	Comments
Density	1.10 g/cc	0.0397 lb/in ³	ISO 1183
Water Absorption	9.0 %	9.0 %	Test Sim. to ISO 62
Moisture Absorption at Equilibrium	2.7 %	2.7 %	23°C/50% R.H.; Test Sim. to ISO 62
Melt Flow	90 g/10 min @Load 5.00 kg, Temperature 260 °C	90 g/10 min @Load 11.0 lb, Temperature 500 °F	Calculated from MVR using melt density; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	40.0 MPa	5800 psi	Conditioned; ISO 527-1/-2
	65.0 MPa	9430 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	1.20 GPa	174 ksi	Conditioned; ISO 527-1/-2
	2.80 GPa	406 ksi	ISO 527-1/-2
Charpy Impact Unnotched	NB @Temperature -30.0 °C	NB @Temperature -22.0 °F	ISO 179/1eU
	NB @Temperature -30.0 °C	NB @Temperature -22.0 °F	Conditioned; ISO 179/1eU
	NB @Temperature 23.0 °C	NB @Temperature 73.4 °F	ISO 179/1eU

Mechanical Properties	Metric	English	Comments
	@Temperature 23.0 °C	@Temperature 73.4 °F	Conditioned; ISO 179/1eU
Charpy Impact, Notched	<= 1.00 J/cm ²	<= 4.76 ft-lb/in ²	ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	<= 1.00 J/cm ²	<= 4.76 ft-lb/in ²	Conditioned; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	1.00 J/cm ²	4.76 ft-lb/in ²	ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	5.00 J/cm ²	23.8 ft-lb/in ²	Conditioned; ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Impact	4339	4339	Puncture maximum force (N); ISO 6603-2
	5870	5870	
	@Temperature -30.0 °C	@Temperature -22.0 °F	Puncture maximum force (N); ISO 6603-2
Puncture Energy	110 J	81.1 ft-lb	ISO 6603-2
	140 J	103 ft-lb	Conditioned; ISO 6603-2
	20.0 J	14.8 ft-lb	ISO 6603-2
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	20.0 J	14.8 ft-lb	Conditioned; ISO 6603-2
	@Temperature -30.0 °C	@Temperature -22.0 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	100 Åµm/m-Å°C	55.6 Åµin/in-Å°F	ISO 11359-1/-2
CTE, linear, Transverse to Flow	110 Åµm/m-Å°C	61.1 Åµin/in-Å°F	ISO 11359-1/-2
Melting Point	222 Å°C	432 Å°F	10Å°C/min; ISO 11357-1/-3
Deflection Temperature at 0.46 MPa (66 psi)	135 Å°C	275 Å°F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	50.0 Å°C	122 Å°F	ISO 75-1/-2

Thermal Properties	Metric	English	Comments
Vicat Softening Point	180 Â°C	356 Â°F	50Â°C/h 50N; ISO 306
Flammability, UL94	HB	HB	IEC 60695-11-10
	@Thickness 0.800 mm	@Thickness 0.0315 in	
Oxygen Index	HB	HB	IEC 60695-11-10
	@Thickness 1.60 mm	@Thickness 0.0630 in	
Oxygen Index	22 %	22 %	ISO 4589-1/-2

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+13 ohm-cm	1.00e+13 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	3.3	3.3	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Constant	3.7	3.7	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Constant	3.8	3.8	Conditioned; IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Constant	8.5	8.5	Conditioned; IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	35.0 kV/mm	889 kV/in	IEC 60243-1
	35.0 kV/mm	889 kV/in	Conditioned; IEC 60243-1
Dissipation Factor	0.011	0.011	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dissipation Factor	0.019	0.019	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dissipation Factor	0.066	0.066	Conditioned; IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

Electrical Properties	0.165 Metric	0.165 English	Comments
	@Frequency 100 Hz	@Frequency 100 Hz	IEC 60250
Comparative Tracking Index	600 V	600 V	IEC 60112

Descriptive Properties	Value	Comments
Features	High impact or high impact modified	
Form	Pellets	
ISO Shortname	ISO 1874-PA 6-I,MR,-030	
Processing	Injection molding	
Region	Asia Pacific	
	Europe	
	Near East/Africa	
	North America	
	South and Central America	

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