

## Lanxess Durethan® BC 40 SR2 000000 Nylon 6

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

### Material Notes:

PA 6 injection molding grade, high viscosity, non-reinforced, higher notched impact strength than BC 30, impact-modified

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Lanxess-Durethan-BC-40-SR2-000000-Nylon-6.php](http://www.lookpolymers.com/polymer_Lanxess-Durethan-BC-40-SR2-000000-Nylon-6.php)

Physical Properties	Metric	English	Comments
Density	1.10 g/cc	0.0397 lb/in <sup>3</sup>	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	27 g/10 min @Load 5.00 kg, Temperature 260 °C	27 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
	70.0 MPa	10200 psi	ISO 527-1/-2
Elongation at Break	20 %	20 %	Nominal; ISO 527-1/-2
	>= 50 %	>= 50 %	Nominal, Conditioned; ISO 527-1/-2
Elongation at Yield	4.0 %	4.0 %	ISO 527-1/-2
	30 %	30 %	Conditioned; ISO 527-1/-2
Tensile Modulus	1.20 GPa	174 ksi	Conditioned; ISO 527-1/-2
	2.70 GPa	392 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 Â°C	@Temperature 73.4 Â°F	Conditioned; ISO 179/1eU
Charpy Impact, Notched	1.50 J/cmÂ²	7.14 ft-lb/inÂ²	ISO 179/1eA
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
	1.50 J/cmÂ²	7.14 ft-lb/inÂ²	Conditioned; ISO 179/1eA
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
	2.00 J/cmÂ²	9.52 ft-lb/inÂ²	ISO 179/1eA
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
	10.0 J/cmÂ²	47.6 ft-lb/inÂ²	Conditioned; ISO 179/1eA
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
Puncture Energy	30.0 J	22.1 ft-lb	Conditioned; ISO 6603-2
	150 J	111 ft-lb	ISO 6603-2
	90.0 J	66.4 ft-lb	ISO 6603-2
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
	90.0 J	66.4 ft-lb	Conditioned; ISO 6603-2
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	90.0 Âµm/m-Â°C	50.0 Âµin/in-Â°F	ISO 11359-1/-2
CTE, linear, Transverse to Flow	100 Âµm/m-Â°C	55.6 Âµin/in-Â°F	ISO 11359-1/-2
Melting Point	222 Â°C	432 Â°F	10Â°C/min; ISO 11357-1/-3
Deflection Temperature at 0.46 MPa (66 psi)	130 Â°C	266 Â°F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	50.0 Â°C	122 Â°F	ISO 75-1/-2
Deflection Temperature at 8.0 MPa	45.0 Â°C	113 Â°F	ISO 75-1/-2
Vicat Softening Point	180 Â°C	356 Â°F	50Â°C/h 50N; ISO 306
Flammability, UL94	HB	HB	IEC 60695-11-10
	HB	HB	

Thermal Properties	Metric @ Thickness 3.20 mm	English @ Thickness 0.126 in	IEC 60695-11-10 Comments
Oxygen Index	21 %	21 %	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+13 ohm	1.00e+13 ohm	IEC 60093
Dielectric Constant	3.3	3.3	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	4.0	4.0	IEC 60250
Dielectric Strength	@Frequency 100 Hz	@Frequency 100 Hz	Conditioned; IEC 60250
	4.0	4.0	
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dissipation Factor	14	14	Conditioned; IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	30.0 kV/mm	762 kV/in	Conditioned; IEC 60243-1
	35.0 kV/mm	889 kV/in	IEC 60243-1
Dissipation Factor	0.0125	0.0125	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.020	0.020	IEC 60250
Comparative Tracking Index	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	Conditioned; IEC 60250
	0.090	0.090	
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	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
Features	High impact or high impact modified	

Descriptive Properties	Value	Comments
ISO Shortname	ISO 1874-PA 6-I, MR,-30	
Processing	Injection molding	
Region	Asia Pacific	
	Europe	
	Near East/Africa	
	North America	
	South and Central America	

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