

Lanxess Durethan® BC 550 Z DUSXBL 900116 Nylon 6, Impact Modified

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6, Impact Grade

Material Notes:

PA 6, non-reinforced, blow molding, impact modified, heat-aging stabilized Information provided by LANXESS.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Lanxess-Durethan-BC-550-Z-DUSXBL-900116-Nylon-6-Impact-Modified.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.07 g/cc	1.07 g/cc	ISO 1183
Linear Mold Shrinkage, Flow	0.0020 cm/cm	0.0020 in/in	Post-shrinkage, 60x60x2; 120°C; 4 hour; ISO 294-4
	0.015 cm/cm	0.015 in/in	60x60x2; 260°C / MT 80°C; 600 bar; ISO 294-4
Linear Mold Shrinkage, Transverse	0.0020 cm/cm	0.0020 in/in	Post-shrinkage, 60x60x2; 120°C; 4 hour; ISO 294-4
	0.015 cm/cm	0.015 in/in	60x60x2; 260°C / MT 80°C; 600 bar; ISO 294-4

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	50.0 MPa	7250 psi	d.a.m.; ISO 527-1, -2; 50 mm/min
Elongation at Break	140 %	140 %	d.a.m.; ISO 527-1, -2; 50 mm/min
Elongation at Yield	4.0 %	4.0 %	d.a.m.; ISO 527-1, -2; 50 mm/min
Tensile Modulus	2.00 GPa	290 ksi	d.a.m.; ISO 527-1, -2; 1 mm/min
Flexural Strength	21.0 MPa @Strain 9.00 %	3050 psi @Strain 9.00 %	cond., 2 mm/min; ISO 178-A
	66.0 MPa @Strain 6.00 %	9570 psi @Strain 6.00 %	d.a.m., 2 mm/min; ISO 178-A
Flexural Yield Strength	14.0 MPa @Strain 3.50 %	2030 psi @Strain 3.50 %	cond., 2 mm/min; ISO 178-A
	55.0 MPa @Strain 3.50 %	7980 psi @Strain 3.50 %	d.a.m., 2 mm/min; ISO 178-A
Flexural Modulus	0.470 GPa	68.2 ksi	cond., 2 mm/min; ISO 178-A
	1.80 GPa	261 ksi	d.a.m., 2 mm/min; ISO 178-A
	25.0 kJ/m ²	11.9 ft-lb/in ²	

Izod Impact Notched (ISO) Mechanical Properties	Metric @Temperature -30.0 °C	English @Temperature -22.0 °F	d.a.m.; ISO 180-1A Comments
	85.0 kJ/m ²	40.4 ft-lb/in ²	d.a.m.; ISO 180-1A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	105 kJ/m ²	50.0 ft-lb/in ²	cond.; ISO 180-1A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Unnotched (ISO)	NB	NB	d.a.m.; ISO 180-1U
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	NB	NB	cond.; ISO 180-1U
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	NB	NB	d.a.m.; ISO 180-1U
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact Unnotched	NB	NB	d.a.m.; ISO 179-1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	NB	NB	d.a.m.; ISO 179-1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	2.50 J/cm ²	11.9 ft-lb/in ²	d.a.m.; ISO 179-1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	10.0 J/cm ²	47.6 ft-lb/in ²	d.a.m.; ISO 179-1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	13.0 J/cm ²	61.9 ft-lb/in ²	cond.; ISO 179-1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Puncture Energy	65.0 J	47.9 ft-lb	ISO 6603-2
	@Load <=510 kg, Temperature 23.0 °C	@Load <=1120 lb, Temperature 73.4 °F	
	67.0 J	49.4 ft-lb	ISO 6603-2
	@Load <=581 kg, Temperature -30.0 °C	@Load <=1280 lb, Temperature -22.0 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	140 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	77.8 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ISO 11359-1, -2
	@Temperature 23.0 - 55.0 $\text{Å}^\circ\text{C}$	@Temperature 73.4 - 131 $\text{Å}^\circ\text{F}$	
CTE, linear, Transverse to Flow	130 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	72.2 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ISO 11359-1, -2
	@Temperature 23.0 - 55.0 $\text{Å}^\circ\text{C}$	@Temperature 73.4 - 131 $\text{Å}^\circ\text{F}$	
Melting Point	219 $\text{Å}^\circ\text{C}$	426 $\text{Å}^\circ\text{F}$	10 $\text{Å}^\circ\text{C}/\text{min}$; ISO 11357-1, -3
Deflection Temperature at 1.8 MPa (264 psi)	53.0 $\text{Å}^\circ\text{C}$	127 $\text{Å}^\circ\text{F}$	ISO 75-1, -2

Processing Properties	Metric	English	Comments
Melt Temperature	230 - 280 $\text{Å}^\circ\text{C}$	446 - 536 $\text{Å}^\circ\text{F}$	
	260 $\text{Å}^\circ\text{C}$	500 $\text{Å}^\circ\text{F}$	for test specimens; ISO 294
Mold Temperature	60.0 - 90.0 $\text{Å}^\circ\text{C}$	140 - 194 $\text{Å}^\circ\text{F}$	
	80.0 $\text{Å}^\circ\text{C}$	176 $\text{Å}^\circ\text{F}$	for test specimens; ISO 294
Drying Temperature	80.0 $\text{Å}^\circ\text{C}$	176 $\text{Å}^\circ\text{F}$	
Dry Time	2 - 6 hour	2 - 6 hour	
Moisture Content	0.00 - 0.060 %	0.00 - 0.060 %	residual; Karl Fischer Test

Descriptive Properties	Value	Comments
ISO Shortname	ISO 1874-PA 6-HI, BHR, 14-020	

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