

## Lanxess Durethan® BKV 40 H2.0 901510 Nylon 6, Glass Fiber Reinforced

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6, 40% Glass Fiber Filled

### Material Notes:

PA 6, 40% glass fibers, injection molding, heat-aging stabilized Information provided by LANXESS.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Lanxess-Durethan-BKV-40-H20-901510-Nylon-6-Glass-Fiber-Reinforced.php](http://www.lookpolymers.com/polymer_Lanxess-Durethan-BKV-40-H20-901510-Nylon-6-Glass-Fiber-Reinforced.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.46 g/cc	1.46 g/cc	ISO 1183
Moisture Absorption at Equilibrium	1.8 %	1.8 %	50% RH; ISO 62
Water Absorption at Saturation	6.0 %	6.0 %	ISO 62
Linear Mold Shrinkage, Flow	0.00030 cm/cm	0.00030 in/in	Post-shrinkage, 150x105x3; 120°C; 4 hour; ISO 2577
	0.0016 cm/cm	0.0016 in/in	150x105x3; 280°C / MT 80°C; 400 bar; ISO 2577
Linear Mold Shrinkage, Transverse	0.00070 cm/cm	0.00070 in/in	Post-shrinkage, 150x105x3; 120°C; 4 hour; ISO 2577
	0.0085 cm/cm	0.0085 in/in	150x105x3; 280°C / MT 80°C; 400 bar; ISO 2577

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	130 MPa	18900 psi	cond.; ISO 527-1, -2; 5 mm/min
	195 MPa	28300 psi	d.a.m.; ISO 527-1, -2; 5 mm/min
Tensile Strength, Yield	130 MPa	18900 psi	cond.; ISO 527-1, -2; 50 mm/min
	195 MPa	28300 psi	d.a.m.; ISO 527-1, -2; 50 mm/min
Elongation at Break	3.0 %	3.0 %	d.a.m.; ISO 527-1, -2; 5 mm/min
	6.0 %	6.0 %	cond.; ISO 527-1, -2; 5 mm/min
Elongation at Yield	3.0 %	3.0 %	d.a.m.; ISO 527-1, -2; 50 mm/min
	6.0 %	6.0 %	cond.; ISO 527-1, -2; 50 mm/min
Tensile Modulus	7.80 GPa	1130 ksi	cond.; ISO 527-1, -2; 1 mm/min
	11.9 GPa	1730 ksi	d.a.m.; ISO 527-1, -2; 1 mm/min
Flexural Strength	200 MPa	29000 psi	cond., 2 mm/min; ISO 178-A
	@Strain 5.00 %	@Strain 5.00 %	

Mechanical Properties	310 MPa Metric	45000 psi English	Comments 2 mm/min; ISO 178-A
	@Strain 4.00 %	@Strain 4.00 %	
Flexural Yield Strength	170 MPa	24700 psi	cond., 2 mm/min; ISO 178-A
	@Strain 3.50 %	@Strain 3.50 %	
Flexural Modulus	305 MPa	44200 psi	d.a.m., 2 mm/min; ISO 178-A
	@Strain 3.50 %	@Strain 3.50 %	
Izod Impact, Notched (ISO)	11.0 kJ/m <sup>2</sup>	5.23 ft-lb/in <sup>2</sup>	cond.; ISO 180-1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact Unnotched	13.0 kJ/m <sup>2</sup>	6.19 ft-lb/in <sup>2</sup>	d.a.m.; ISO 180-1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact Unnotched	18.0 kJ/m <sup>2</sup>	8.57 ft-lb/in <sup>2</sup>	d.a.m.; ISO 180-1A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact Unnotched	24.0 kJ/m <sup>2</sup>	11.4 ft-lb/in <sup>2</sup>	cond.; ISO 180-1A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact Unnotched	7.00 J/cm <sup>2</sup>	33.3 ft-lb/in <sup>2</sup>	d.a.m.; ISO 179-1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact Unnotched	7.00 J/cm <sup>2</sup>	33.3 ft-lb/in <sup>2</sup>	cond.; ISO 179-1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact Unnotched	8.50 J/cm <sup>2</sup>	40.4 ft-lb/in <sup>2</sup>	d.a.m.; ISO 179-1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact Unnotched	9.00 J/cm <sup>2</sup>	42.8 ft-lb/in <sup>2</sup>	cond.; ISO 179-1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	1.50 J/cm <sup>2</sup>	7.14 ft-lb/in <sup>2</sup>	d.a.m.; ISO 179-1eA
	2.00 J/cm <sup>2</sup>	9.52 ft-lb/in <sup>2</sup>	cond.; ISO 179-1eA

Thermal Properties	Metric	English	Comments
Melting Point	222 Â°C	432 Â°F	10Â°C/min; ISO 11357-1, -3
Deflection Temperature at 0.46 MPa (66 psi)	215 Â°C	419 Â°F	ISO 75-1, -2
Deflection Temperature at 1.8 MPa (264 psi)	200 Â°C	392 Â°F	ISO 75-1, -2
Vicat Softening Point	>= 200 Â°C @Load 5.10 kg	>= 392 Â°F @Load 11.2 lb	120Â°C/hour; ISO 306
Flammability, UL94	HB @Thickness 1.60 mm	HB @Thickness 0.0630 in	
	HB @Thickness 3.20 mm	HB @Thickness 0.126 in	
Glow Wire Test	650 Â°C @Diameter 2.00 mm	1200 Â°F @Diameter 0.0787 in	GWFI; IEC 60695-2-12

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+11 ohm-cm	1.00e+11 ohm-cm	cond.; IEC 60093
	1.00e+15 ohm-cm	1.00e+15 ohm-cm	d.a.m.; IEC 60093
Surface Resistance	1.00e+10 ohm	1.00e+10 ohm	cond.; IEC 60093
	1.00e+14 ohm	1.00e+14 ohm	d.a.m.; IEC 60093
Dielectric Constant	4.0 @Frequency 100 Hz	4.0 @Frequency 100 Hz	d.a.m.; IEC 60250
	4.0 @Frequency 1.00e+6 Hz	4.0 @Frequency 1.00e+6 Hz	d.a.m.; IEC 60250
	5.0 @Frequency 1.00e+6 Hz	5.0 @Frequency 1.00e+6 Hz	cond.; IEC 60250
	10 @Frequency 100 Hz	10 @Frequency 100 Hz	cond.; IEC 60250
Dielectric Strength	35.0 kV/mm @Thickness 1.00 mm	889 kV/in @Thickness 0.0394 in	cond.; IEC 60243-1
	40.0 kV/mm	1020 kV/in	

Electrical Properties	Metric @ Thickness 1.00 mm	English @ Thickness 0.0394 in	d.a.m.: IEC 60243-1 Comments
Dissipation Factor	0.0050 @Frequency 100 Hz	0.0050 @Frequency 100 Hz	d.a.m.; IEC 60250
	0.015 @Frequency 1.00e+6 Hz	0.015 @Frequency 1.00e+6 Hz	d.a.m.; IEC 60250
	0.12 @Frequency 1.00e+6 Hz	0.12 @Frequency 1.00e+6 Hz	cond.; IEC 60250
	0.25 @Frequency 100 Hz	0.25 @Frequency 100 Hz	cond.; IEC 60250
Comparative Tracking Index	400 V	400 V	d.a.m.; Solution A; IEC 60112

Processing Properties	Metric	English	Comments
Melt Temperature	270 - 290 Â°C	518 - 554 Â°F	
	280 Â°C	536 Â°F	for test specimens; ISO 294
Mold Temperature	80.0 Â°C	176 Â°F	for test specimens; ISO 294
	80.0 - 120 Â°C	176 - 248 Â°F	
Drying Temperature	80.0 Â°C	176 Â°F	
Dry Time	2 - 6 hour	2 - 6 hour	
Moisture Content	0.030 - 0.12 %	0.030 - 0.12 %	residual; Karl Fischer Test

Descriptive Properties	Value	Comments
ISO Shortname	ISO 1874-PA 6, GHR, 14-120, GF40	

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