

## Lanxess Durethan® BKV 30 G W1 901317 Nylon 6, Glass Fiber Reinforced

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6, 30% Glass Fiber Filled

### Material Notes:

PA 6, 30% glass fibers, injection molding, weather stabilized Information provided by LANXESS.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Lanxess-Durethan-BKV-30-G-W1-901317-Nylon-6-Glass-Fiber-Reinforced.php](http://www.lookpolymers.com/polymer_Lanxess-Durethan-BKV-30-G-W1-901317-Nylon-6-Glass-Fiber-Reinforced.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.365 g/cc	1.365 g/cc	ISO 1183
Moisture Absorption at Equilibrium	2.0 %	2.0 %	50% RH; ISO 62
Water Absorption at Saturation	6.4 %	6.4 %	ISO 62
Linear Mold Shrinkage, Flow	0.0010 cm/cm	0.0010 in/in	Post-shrinkage, 60x60x2; 120Å°C; 4 hour; ISO 294-4
	0.0020 cm/cm	0.0020 in/in	60x60x2; 280Å°C / MT 80Å°C; 600 bar; ISO 294-4
Linear Mold Shrinkage, Transverse	0.0020 cm/cm	0.0020 in/in	Post-shrinkage, 60x60x2; 120Å°C; 4 hour; ISO 294-4
	0.0060 cm/cm	0.0060 in/in	60x60x2; 280Å°C / MT 80Å°C; 600 bar; ISO 294-4

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	209 MPa	30300 psi	ISO 2039-1
Tensile Strength at Break	106 MPa	15400 psi	cond.; ISO 527-1, -2; 5 mm/min
	180 MPa	26100 psi	d.a.m.; ISO 527-1, -2; 5 mm/min
Elongation at Break	2.7 %	2.7 %	d.a.m.; ISO 527-1, -2; 5 mm/min
	6.1 %	6.1 %	cond.; ISO 527-1, -2; 5 mm/min
Tensile Modulus	6.60 GPa	957 ksi	cond.; ISO 527-1, -2; 1 mm/min
	9.90 GPa	1440 ksi	d.a.m.; ISO 527-1, -2; 1 mm/min
Flexural Strength	177 MPa	25700 psi	cond., 2 mm/min; ISO 178-A
	@Strain 5.70 %	@Strain 5.70 %	
Flexural Yield Strength	270 MPa	39200 psi	d.a.m., 2 mm/min; ISO 178-A
	@Strain 3.70 %	@Strain 3.70 %	
Flexural Yield Strength	156 MPa	22600 psi	cond., 2 mm/min; ISO 178-A
	@Strain 3.50 %	@Strain 3.50 %	

Mechanical Properties	Metric	English	Comments
	@Strain 3.50 %	@Strain 3.50 %	d.a.m., 2 mm/min; ISO 178-A
Flexural Modulus	6.30 GPa	914 ksi	cond., 2 mm/min; ISO 178-A
	8.70 GPa	1260 ksi	d.a.m., 2 mm/min; ISO 178-A
Izod Impact, Notched (ISO)	10.0 kJ/m <sup>2</sup>	4.76 ft-lb/in <sup>2</sup>	d.a.m.; ISO 180-1A
	10.0 kJ/m <sup>2</sup>	4.76 ft-lb/in <sup>2</sup>	cond.; ISO 180-1A
Izod Impact, Unnotched (ISO)	40.0 kJ/m <sup>2</sup>	19.0 ft-lb/in <sup>2</sup>	cond.; ISO 180-1U
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
	45.0 kJ/m <sup>2</sup>	21.4 ft-lb/in <sup>2</sup>	d.a.m.; ISO 180-1U
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
	50.0 kJ/m <sup>2</sup>	23.8 ft-lb/in <sup>2</sup>	d.a.m.; ISO 180-1U
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
	60.0 kJ/m <sup>2</sup>	28.6 ft-lb/in <sup>2</sup>	cond.; ISO 180-1U
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
Charpy Impact Unnotched	4.00 J/cm <sup>2</sup>	19.0 ft-lb/in <sup>2</sup>	cond.; ISO 179-1eU
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
	5.00 J/cm <sup>2</sup>	23.8 ft-lb/in <sup>2</sup>	d.a.m.; ISO 179-1eU
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
	6.00 J/cm <sup>2</sup>	28.6 ft-lb/in <sup>2</sup>	d.a.m.; ISO 179-1eU
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
	6.50 J/cm <sup>2</sup>	30.9 ft-lb/in <sup>2</sup>	cond.; ISO 179-1eU
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
Puncture Energy	2.00 J	1.48 ft-lb	ISO 6603-2
	@Load <=75.5 kg, Temperature -30.0 Â°C	@Load <=166 lb, Temperature -22.0 Â°F	
	3.00 J	2.21 ft-lb	ISO 6603-2
	@Load <=85.7 kg, Temperature 23.0 Â°C	@Load <=189 lb, Temperature 73.4 Â°F	

Mechanical Properties	Metric	English	Comments
<b>Thermal Properties</b>			
	<b>Metric</b>	<b>English</b>	<b>Comments</b>
CTE, linear, Parallel to Flow	30.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$ @Temperature 23.0 - 55.0 $\text{Å}^\circ\text{C}$	16.7 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$ @Temperature 73.4 - 131 $\text{Å}^\circ\text{F}$	ISO 11359-1, -2
CTE, linear, Transverse to Flow	80.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$ @Temperature 23.0 - 55.0 $\text{Å}^\circ\text{C}$	44.4 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$ @Temperature 73.4 - 131 $\text{Å}^\circ\text{F}$	ISO 11359-1, -2
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 0.46 MPa (66 psi)	215 $\text{Å}^\circ\text{C}$	419 $\text{Å}^\circ\text{F}$	ISO 75-1, -2
Deflection Temperature at 1.8 MPa (264 psi)	200 $\text{Å}^\circ\text{C}$	392 $\text{Å}^\circ\text{F}$	ISO 75-1, -2
Vicat Softening Point	211 $\text{Å}^\circ\text{C}$ @Load 5.10 kg	412 $\text{Å}^\circ\text{F}$ @Load 11.2 lb	120 $\text{Å}^\circ\text{C}/\text{hour}$ ; ISO 306

Electrical Properties	Metric	English	Comments
Comparative Tracking Index	500 V	500 V	d.a.m.; Solution A; IEC 60112

Processing Properties	Metric	English	Comments
Melt Temperature	270 - 290 $\text{Å}^\circ\text{C}$	518 - 554 $\text{Å}^\circ\text{F}$	
	280 $\text{Å}^\circ\text{C}$	536 $\text{Å}^\circ\text{F}$	for test specimens; ISO 294
Mold Temperature	80.0 $\text{Å}^\circ\text{C}$	176 $\text{Å}^\circ\text{F}$	for test specimens; ISO 294
	80.0 - 120 $\text{Å}^\circ\text{C}$	176 - 248 $\text{Å}^\circ\text{F}$	
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	0.030 - 0.12 %	0.030 - 0.12 %	residual; Karl Fischer Test

Descriptive Properties	Value	Comments
Flammability Test	passed	ISO 3795; US-FMVSS302
ISO Shortname	ISO 1874-PA 6, GLR, 14-100, GF30	

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