

Lanxess Durethan® BKV 50 H EF DUS022 900116 Nylon 6, Glass Fiber Reinforced

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6, 50% Glass Fiber Filled

Material Notes:

PA 6, 50% glass fibers, injection molding, improved flowability, heat-aging stabilized Information provided by LANXESS.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Lanxess-Durethan-BKV-50-H-EF-DUS022-900116-Nylon-6-Glass-Fiber-Reinforced.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.57 g/cc	1.57 g/cc	ISO 1183
Linear Mold Shrinkage, Flow	0.00020 cm/cm	0.00020 in/in	Post-shrinkage, 60x60x2; 120Â°C; 4 hour; ISO 294-4
	0.0020 cm/cm	0.0020 in/in	60x60x2; 280Â°C / MT 80Â°C; 600 bar; ISO 294-4
Linear Mold Shrinkage, Transverse	0.00070 cm/cm	0.00070 in/in	Post-shrinkage, 60x60x2; 120Â°C; 4 hour; ISO 294-4
	0.0070 cm/cm	0.0070 in/in	60x60x2; 280Â°C / MT 80Â°C; 600 bar; ISO 294-4

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	128 MPa	18600 psi	cond.; ISO 527-1, -2; 5 mm/min
	205 MPa	29700 psi	d.a.m.; ISO 527-1, -2; 5 mm/min
Elongation at Break	2.3 %	2.3 %	ISO 527-1, -2; 5 mm/min
	4.3 %	4.3 %	ISO 527-1, -2; 5 mm/min
Tensile Modulus	9.50 GPa	1380 ksi	cond.; ISO 527-1, -2; 1 mm/min
	16.2 GPa	2350 ksi	d.a.m.; ISO 527-1, -2; 1 mm/min
Flexural Strength	203 MPa	29400 psi	cond., 2 mm/min; ISO 178-A
	@Strain 4.00 %	@Strain 4.00 %	
	320 MPa	46400 psi	d.a.m., 2 mm/min; ISO 178-A
	@Strain 2.90 %	@Strain 2.90 %	
Flexural Yield Strength	197 MPa	28600 psi	cond., 2 mm/min; ISO 178-A
	@Strain 3.50 %	@Strain 3.50 %	
Flexural Modulus	9.70 GPa	1410 ksi	cond., 2 mm/min; ISO 178-A
	15.0 GPa	2180 ksi	d.a.m., 2 mm/min; ISO 178-A

Mechanical Properties	Metric	English	Comments
Izod Impact, Notched (ISO)	11.0 kJ/mÂ² @Temperature -30.0 Â°C	8.23 ft-lb/inÂ² @Temperature -22.0 Â°F	d.a.m.; ISO 180-1A
	14.0 kJ/mÂ² @Temperature 23.0 Â°C	6.66 ft-lb/inÂ² @Temperature 73.4 Â°F	d.a.m.; ISO 180-1A
	20.0 kJ/mÂ² @Temperature 23.0 Â°C	9.52 ft-lb/inÂ² @Temperature 73.4 Â°F	cond.; ISO 180-1A
Izod Impact, Unnotched (ISO)	70.0 kJ/mÂ² @Temperature 23.0 Â°C	33.3 ft-lb/inÂ² @Temperature 73.4 Â°F	cond.; ISO 180-1U
	75.0 kJ/mÂ² @Temperature -30.0 Â°C	35.7 ft-lb/inÂ² @Temperature -22.0 Â°F	d.a.m.; ISO 180-1U
	80.0 kJ/mÂ² @Temperature 23.0 Â°C	38.1 ft-lb/inÂ² @Temperature 73.4 Â°F	d.a.m.; ISO 180-1U
Charpy Impact Unnotched	8.00 J/cmÂ² @Temperature 23.0 Â°C	38.1 ft-lb/inÂ² @Temperature 73.4 Â°F	cond.; ISO 179-1eU
	8.00 J/cmÂ² @Temperature -30.0 Â°C	38.1 ft-lb/inÂ² @Temperature -22.0 Â°F	d.a.m.; ISO 179-1eU
	8.50 J/cmÂ² @Temperature 23.0 Â°C	40.4 ft-lb/inÂ² @Temperature 73.4 Â°F	d.a.m.; ISO 179-1eU
Charpy Impact, Notched	1.00 J/cmÂ² @Temperature -30.0 Â°C	4.76 ft-lb/inÂ² @Temperature -22.0 Â°F	d.a.m.; ISO 179-1eA
	1.30 J/cmÂ² @Temperature 23.0 Â°C	6.19 ft-lb/inÂ² @Temperature 73.4 Â°F	d.a.m.; ISO 179-1eA
Puncture Energy	3.60 J @Load <=124.8 kg	2.66 ft-lb @Load <=275.2 lb	d.a.m.; ISO 6603-2
	5.80 J @Load <=128.7 kg	4.28 ft-lb @Load <=283.7 lb	cond.; ISO 6603-2

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	10.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	5.56 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	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	80.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	44.4 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	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	220 $\text{Å}^\circ\text{C}$	428 $\text{Å}^\circ\text{F}$	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)	207 $\text{Å}^\circ\text{C}$	405 $\text{Å}^\circ\text{F}$	ISO 75-1, -2

Processing Properties	Metric	English	Comments
Melt Temperature	270 - 290 $\text{Å}^\circ\text{C}$	518 - 554 $\text{Å}^\circ\text{F}$	for test specimens; ISO 294
	280 $\text{Å}^\circ\text{C}$	536 $\text{Å}^\circ\text{F}$	
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
ISO Shortname	ISO 1874-PA 6, GHR, 10-160, GF50	

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