

Lanxess Durethan® BKV 215 000000 Nylon 6-Copolymer, Glass Fiber Reinforced, Impact Modified

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

Material Notes:

PA 6-Copolymer, 15% glass fibers, injection molding impact modified Information provided by LANXESS.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Lanxess-Durethan-BKV-215-000000-Nylon-6-Copolymer-Glass-Fiber-Reinforced-Impact-Modified.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.18 g/cc	1.18 g/cc	ISO 1183
Bulk Density	0.600 g/cc	0.0217 lb/in ³	ISO 60
Moisture Absorption at Equilibrium	2.0 %	2.0 %	50% RH; ISO 62
Water Absorption at Saturation	7.0 %	7.0 %	ISO 62
Linear Mold Shrinkage, Flow	0.0014 cm/cm	0.0014 in/in	Post-shrinkage, 60x60x2; 120°C; 4 hour; ISO 294-4
	0.0059 cm/cm	0.0059 in/in	60x60x2; 280°C / MT 80°C; 600 bar; ISO 294-4
Linear Mold Shrinkage, Transverse	0.0015 cm/cm	0.0015 in/in	Post-shrinkage, 60x60x2; 120°C; 4 hour; ISO 294-4
	0.0061 cm/cm	0.0061 in/in	60x60x2; 280°C / MT 80°C; 600 bar; ISO 294-4

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	55.0 MPa	7980 psi	ISO 2039-1
	110 MPa	16000 psi	ISO 2039-1
Tensile Strength at Break	55.0 MPa	7980 psi	cond.; ISO 527-1, -2; 5 mm/min
	85.0 MPa	12300 psi	d.a.m.; ISO 527-1, -2; 5 mm/min
Elongation at Break	4.5 %	4.5 %	d.a.m.; ISO 527-1, -2; 5 mm/min
	15 %	15 %	cond.; ISO 527-1, -2; 5 mm/min
Tensile Modulus	2.40 GPa	348 ksi	cond.; ISO 527-1, -2; 1 mm/min
	4.50 GPa	653 ksi	d.a.m.; ISO 527-1, -2; 1 mm/min
Flexural Strength	80.0 MPa	11600 psi	cond., 2 mm/min; ISO 178-A
	@Strain 7.00 %	@Strain 7.00 %	

Mechanical Properties	130 MPa Metric	18900 psi English	Comments d.a.m., 2 mm/min; ISO 178-A
	@Strain 5.00 %	@Strain 5.00 %	
Flexural Yield Strength	60.0 MPa	8700 psi	cond., 2 mm/min; ISO 178-A
	@Strain 3.50 %	@Strain 3.50 %	
	125 MPa	18100 psi	d.a.m., 2 mm/min; ISO 178-A
	@Strain 3.50 %	@Strain 3.50 %	
Flexural Modulus	2.20 GPa	319 ksi	cond., 2 mm/min; ISO 178-A
	4.00 GPa	580 ksi	
Izod Impact, Notched (ISO)	10.0 kJ/mÂ²	4.76 ft-lb/inÂ²	d.a.m.; ISO 180-1A
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
	10.0 kJ/mÂ²	4.76 ft-lb/inÂ²	cond.; ISO 180-1A
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
	18.0 kJ/mÂ²	8.57 ft-lb/inÂ²	d.a.m.; ISO 180-1A
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
	30.0 kJ/mÂ²	14.3 ft-lb/inÂ²	cond.; ISO 180-1A
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
Charpy Impact Unnotched	7.00 J/cmÂ²	33.3 ft-lb/inÂ²	d.a.m.; ISO 179-1eU
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
	7.50 J/cmÂ²	35.7 ft-lb/inÂ²	cond.; ISO 179-1eU
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
	8.00 J/cmÂ²	38.1 ft-lb/inÂ²	cond.; ISO 179-1eU
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
	8.00 J/cmÂ²	38.1 ft-lb/inÂ²	d.a.m.; ISO 179-1eU
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
Charpy Impact, Notched	1.20 J/cmÂ²	5.71 ft-lb/inÂ²	d.a.m.; ISO 179-1eA
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
	1.20 J/cmÂ²	5.71 ft-lb/inÂ²	

Mechanical Properties	Metric	English	Comments
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	cond.; ISO 179-1eA
	2.00 J/cmÂ²	9.52 ft-lb/inÂ²	d.a.m.; ISO 179-1eA
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
	3.50 J/cmÂ²	16.7 ft-lb/inÂ²	cond.; ISO 179-1eA
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
Puncture Energy	32.0 J	23.6 ft-lb	cond.; ISO 6603-2
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
	4.80 J	3.54 ft-lb	d.a.m.; ISO 6603-2
	@Load <=66.3 kg, Temperature -30.0 Â°C	@Load <=146 lb, Temperature -22.0 Â°F	
	13.0 J	9.59 ft-lb	d.a.m.; ISO 6603-2
	@Load <=102.3 kg, Temperature 23.0 Â°C	@Load <=225.5 lb, Temperature 73.4 Â°F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	40.0 Âµm/m-Â°C	22.2 Âµin/in-Â°F	ISO 11359-1, -2
	@Temperature 23.0 - 55.0 Â°C	@Temperature 73.4 - 131 Â°F	
CTE, linear, Transverse to Flow	150 Âµm/m-Â°C	83.3 Âµin/in-Â°F	ISO 11359-1, -2
	@Temperature 23.0 - 55.0 Â°C	@Temperature 73.4 - 131 Â°F	
Melting Point	214 Â°C	417 Â°F	10Â°C/min; ISO 11357-1, -3
Deflection Temperature at 0.46 MPa (66 psi)	205 Â°C	401 Â°F	ISO 75-1, -2
Deflection Temperature at 1.8 MPa (264 psi)	175 Â°C	347 Â°F	ISO 75-1, -2
Deflection Temperature at 8.0 MPa	60.0 Â°C	140 Â°F	ISO 75-1, -2
Vicat Softening Point	200 Â°C	392 Â°F	120Â°C/hour; ISO 306
	@Load 5.10 kg	@Load 11.2 lb	
	200 Â°C	392 Â°F	50Â°C/hour; ISO 306
	@Load 5.10 kg	@Load 11.2 lb	
Flammability, UL94	HB	HB	

Thermal Properties	@Thickness 1.60 mm Metric	@Thickness 0.0630 in English	Comments
	HB	HB	
	@Thickness 3.20 mm	@Thickness 0.126 in	
Oxygen Index	22 %	22 %	Method A; ISO 4589-2
Glow Wire Test	650 Â°C	1200 Â°F	GWFI; IEC 60695-2-12
	@Diameter 2.00 mm	@Diameter 0.0787 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+12 ohm-cm	1.00e+12 ohm-cm	cond.; IEC 60093
	1.00e+13 ohm-cm	1.00e+13 ohm-cm	d.a.m.; IEC 60093
Surface Resistance	1.00e+13 ohm	1.00e+13 ohm	cond.; IEC 60093
	1.00e+15 ohm	1.00e+15 ohm	d.a.m.; IEC 60093
Dielectric Constant	3.2	3.2	d.a.m.; IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	3.5	3.5	d.a.m.; IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	3.7	3.7	cond.; IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	10	10	cond.; IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	43.0 kV/mm	1090 kV/in	d.a.m.; IEC 60243-1
	@Thickness 1.00 mm	@Thickness 0.0394 in	
	43.0 kV/mm	1090 kV/in	cond.; IEC 60243-1
	@Thickness 1.00 mm	@Thickness 0.0394 in	
Dissipation Factor	0.0060	0.0060	d.a.m.; IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.015	0.015	d.a.m.; IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	0.080	0.080	cond.; IEC 60250
	@Frequency 1.00e+6	@Frequency 1.00e+6	

Electrical Properties	Hz Metric	Hz English	Comments
	0.15	0.15	cond.; IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Comparative Tracking Index	600 V	600 V	d.a.m.; Solution A; IEC 60112

Processing Properties	Metric	English	Comments
Melt Temperature	260 - 290 Â°C	500 - 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 - 100 Â°C	176 - 212 Â°F	
Drying Temperature	80.0 Â°C	176 Â°F	

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