

Lanxess Durethan® BKV 115 H3.0 000000 Nylon 6-Copolymer, Glass Fiber Reinforced

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

Material Notes:

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

Order this product through the following link:

http://www.lookpolymers.com/polymer_Lanxess-Durethan-BKV-115-H30-000000-Nylon-6-Copolymer-Glass-Fiber-Reinforced.php

| Physical Properties | Metric | English | Comments |
|------------------------------------|--------------|---------------------------|--|
| Specific Gravity | 1.23 g/cc | 1.23 g/cc | ISO 1183 |
| Bulk Density | 0.600 g/cc | 0.0217 lb/in ³ | ISO 60 |
| Moisture Absorption at Equilibrium | 2.5 % | 2.5 % | 50% RH; ISO 62 |
| Water Absorption at Saturation | 8.5 % | 8.5 % | ISO 62 |
| Linear Mold Shrinkage, Flow | 0.0010 cm/cm | 0.0010 in/in | Post-shrinkage, 60x60x2; 120 ^o C; 4 hour; ISO 294-4 |
| | 0.0040 cm/cm | 0.0040 in/in | 60x60x2; 280 ^o C / MT 80 ^o C; 600 bar; ISO 294-4 |
| Linear Mold Shrinkage, Transverse | 0.0010 cm/cm | 0.0010 in/in | Post-shrinkage, 60x60x2; 120 ^o C; 4 hour; ISO 294-4 |
| | 0.0050 cm/cm | 0.0050 in/in | 60x60x2; 280 ^o C / MT 80 ^o C; 600 bar; ISO 294-4 |

| Mechanical Properties | Metric | English | Comments |
|----------------------------|-----------------------------------|-----------------------------------|---------------------------------|
| Tensile Strength at Break | 55.0 MPa | 7980 psi | cond.; ISO 527-1, -2; 5 mm/min |
| | 110 MPa | 16000 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 |
| | 14 % | 14 % | cond.; ISO 527-1, -2; 5 mm/min |
| Tensile Modulus | 2.70 GPa | 392 ksi | cond.; ISO 527-1, -2; 1 mm/min |
| | 5.60 GPa | 812 ksi | d.a.m.; ISO 527-1, -2; 1 mm/min |
| Izod Impact, Notched (ISO) | <= 10.0 kJ/m ² | <= 4.76 ft-lb/in ² | d.a.m.; ISO 180-1A |
| | @Temperature 23.0 ^o C | @Temperature 73.4 ^o F | |
| | <= 10.0 kJ/m ² | <= 4.76 ft-lb/in ² | d.a.m.; ISO 180-1A |
| | @Temperature -30.0 ^o C | @Temperature -22.0 ^o F | |

| Mechanical Properties | Metric | English | Comments |
|------------------------------|---|---|---------------------|
| | 13.0 kJ/m ² @Temperature -30.0 °C | 4.75 ft-lb/in ² @Temperature -22.0 °F | cond.; ISO 180-1A |
| | 15.0 kJ/m ² @Temperature 23.0 °C | 7.14 ft-lb/in ² @Temperature 73.4 °F | cond.; ISO 180-1A |
| Izod Impact, Unnotched (ISO) | 40.0 kJ/m ² @Temperature -30.0 °C | 19.0 ft-lb/in ² @Temperature -22.0 °F | d.a.m.; ISO 180-1U |
| | 45.0 kJ/m ² @Temperature -30.0 °C | 21.4 ft-lb/in ² @Temperature -22.0 °F | cond.; ISO 180-1U |
| | 55.0 kJ/m ² @Temperature 23.0 °C | 26.2 ft-lb/in ² @Temperature 73.4 °F | d.a.m.; ISO 180-1U |
| | 80.0 kJ/m ² @Temperature 23.0 °C | 38.1 ft-lb/in ² @Temperature 73.4 °F | cond.; ISO 180-1U |
| Charpy Impact Unnotched | 4.50 J/cm ² @Temperature -30.0 °C | 21.4 ft-lb/in ² @Temperature -22.0 °F | d.a.m.; ISO 179-1eU |
| | 4.50 J/cm ² @Temperature -30.0 °C | 21.4 ft-lb/in ² @Temperature -22.0 °F | cond.; ISO 179-1eU |
| | 6.00 J/cm ² @Temperature 23.0 °C | 28.6 ft-lb/in ² @Temperature 73.4 °F | d.a.m.; ISO 179-1eU |
| | 8.00 J/cm ² @Temperature 23.0 °C | 38.1 ft-lb/in ² @Temperature 73.4 °F | cond.; ISO 179-1eU |
| Charpy Impact, Notched | <= 1.00 J/cm ² @Temperature 23.0 °C | <= 4.76 ft-lb/in ² @Temperature 73.4 °F | d.a.m.; ISO 179-1eA |
| | <= 1.00 J/cm ² @Temperature -30.0 °C | <= 4.76 ft-lb/in ² @Temperature -22.0 °F | d.a.m.; ISO 179-1eA |
| | <= 1.00 J/cm ² @Temperature -30.0 | <= 4.76 ft-lb/in ² @Temperature -22.0 | cond.; ISO 179-1eA |

| Mechanical Properties | °C Metric | °F English | Comments |
|-----------------------|------------------------|----------------------------|--------------------|
| | 1.50 J/cm ² | 7.14 ft-lb/in ² | |
| | @Temperature 23.0 °C | @Temperature 73.4 °F | cond.; ISO 179-1eA |

| Thermal Properties | Metric | English | Comments |
|---|---|--|---------------------------|
| CTE, linear, Parallel to Flow | 30.0 µm/m-°C @Temperature 23.0 - 55.0 °C | 16.7 µin/in-°F @Temperature 73.4 - 131 °F | ISO 11359-1, -2 |
| CTE, linear, Transverse to Flow | 120 µm/m-°C @Temperature 23.0 - 55.0 °C | 66.7 µin/in-°F @Temperature 73.4 - 131 °F | ISO 11359-1, -2 |
| Melting Point | 212 °C | 414 °F | 10°C/min; ISO 11357-1, -3 |
| Deflection Temperature at 0.46 MPa (66 psi) | 205 °C | 401 °F | ISO 75-1, -2 |
| Deflection Temperature at 1.8 MPa (264 psi) | 185 °C | 365 °F | ISO 75-1, -2 |
| Glow Wire Test | 650 °C @Diameter 2.00 mm | 1200 °F @Diameter 0.0787 in | GWIT; IEC 60695-2-13 |

| Processing Properties | Metric | English | Comments |
|-----------------------|----------------|----------------|-----------------------------|
| Melt Temperature | 260 - 290 °C | 500 - 554 °F | for test specimens; ISO 294 |
| | 280 °C | 536 °F | |
| Mold Temperature | 80.0 °C | 176 °F | for test specimens; ISO 294 |
| | 80.0 - 100 °C | 176 - 212 °F | |
| Drying Temperature | 80.0 °C | 176 °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 6/66-HI, GHR, 14-060, GF15 | |

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