

Lanxess Durethan® DP 1801/30 H3.0 000000 Nylon 6, 30% Glass Fiber

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

Material Notes:

PA 6, 30% glass fibers, injection molding, halogen free flame retardant. Information provided by LANXESS.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Lanxess-Durethan-DP-180130-H30-000000-Nylon-6-30-Glass-Fiber.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.40 g/cc	1.40 g/cc	ISO 1183
Bulk Density	0.700 g/cc	0.0253 lb/in ³	ISO 60
Water Absorption at Saturation	5.9 %	5.9 %	ISO 62
Linear Mold Shrinkage, Flow	0.0014 cm/cm	0.0014 in/in	Post-shrinkage, 60x60x2; 120Å°C; 4 hour; ISO 294-4
	0.0055 cm/cm	0.0055 in/in	60x60x2; 260Å°C / MT 80Å°C; 600 bar; ISO 294-4
Linear Mold Shrinkage, Transverse	0.0015 cm/cm	0.0015 in/in	Post-shrinkage, 60x60x2; 120Å°C; 4 hour; ISO 294-4
	0.0063 cm/cm	0.0063 in/in	60x60x2; 260Å°C / MT 80Å°C; 600 bar; ISO 294-4

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	194 MPa	28100 psi	ISO 2039-1
Tensile Strength at Break	47.0 MPa	6820 psi	cond.; ISO 527-1, -2; 5 mm/min
	93.0 MPa	13500 psi	d.a.m.; ISO 527-1, -2; 5 mm/min
Tensile Strength, Yield	50.0 MPa	7250 psi	cond.; ISO 527-1, -2; 50 mm/min
	96.0 MPa	13900 psi	d.a.m.; ISO 527-1, -2; 50 mm/min
Elongation at Break	4.0 %	4.0 %	d.a.m.; ISO 527-1, -2; 5 mm/min
	28 %	28 %	cond.; ISO 527-1, -2; 5 mm/min
Elongation at Yield	2.4 %	2.4 %	d.a.m.; ISO 527-1, -2; 50 mm/min
	9.7 %	9.7 %	cond.; ISO 527-1, -2; 50 mm/min
Tensile Modulus	3.40 GPa	493 ksi	cond.; ISO 527-1, -2; 1 mm/min
	7.60 GPa	1100 ksi	d.a.m.; ISO 527-1, -2; 1 mm/min
Flexural Strength	75.0 MPa	10900 psi	cond., 2 mm/min; ISO 178-A

Mechanical Properties	@Strain 6.90 % Metric	@Strain 6.90 % English	Comments
	150 MPa	21800 psi	d.a.m., 2 mm/min; ISO 178-A
	@Strain 3.90 %	@Strain 3.90 %	
Flexural Yield Strength	65.0 MPa	9430 psi	cond., 2 mm/min; ISO 178-A
	@Strain 3.50 %	@Strain 3.50 %	
	170 MPa	24700 psi	d.a.m., 2 mm/min; ISO 178-A
	@Strain 3.50 %	@Strain 3.50 %	
Flexural Modulus	3.20 GPa	464 ksi	cond., 2 mm/min; ISO 178-A
	7.30 GPa	1060 ksi	d.a.m., 2 mm/min; ISO 178-A
Izod Impact, Notched (ISO)	<= 10.0 kJ/m ²	<= 4.76 ft-lb/in ²	d.a.m.; ISO 180-1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	<= 10.0 kJ/m ²	<= 4.76 ft-lb/in ²	d.a.m.; ISO 180-1A
	@Temperature -40.0 °C	@Temperature -40.0 °F	
Izod Impact, Unnotched (ISO)	35.0 kJ/m ²	16.7 ft-lb/in ²	d.a.m.; ISO 180-1U
	80.0 kJ/m ²	38.1 ft-lb/in ²	cond.; ISO 180-1U
Charpy Impact Unnotched	5.00 J/cm ²	23.8 ft-lb/in ²	d.a.m.; ISO 179-1eU
	8.40 J/cm ²	40.0 ft-lb/in ²	cond.; ISO 179-1eU
Charpy Impact, Notched	<= 1.00 J/cm ²	<= 4.76 ft-lb/in ²	d.a.m.; ISO 179-1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	<= 1.00 J/cm ²	<= 4.76 ft-lb/in ²	d.a.m.; ISO 179-1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	<= 1.00 J/cm ²	<= 4.76 ft-lb/in ²	d.a.m.; ISO 179-1eA
	@Temperature -40.0 °C	@Temperature -40.0 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	82.0 Åµm/m-Å°C	45.6 Åµin/in-Å°F	ISO 11359-1, -2
	@Temperature 23.0 - 55.0 Å°C	@Temperature 73.4 - 131 Å°F	
CTE, linear, Transverse to Flow	35.0 Åµm/m-Å°C	19.4 Åµin/in-Å°F	ISO 11359-1, -2

Thermal Properties	Metric @Temperature 23.0 - 35.0 Â°C	English @Temperature 73.4 - 139 Â°F	Comments
Melting Point	222 Â°C	432 Â°F	10Â°C/min; ISO 11357-1, -3
Deflection Temperature at 0.46 MPa (66 psi)	210 Â°C	410 Â°F	ISO 75-1, -2
Deflection Temperature at 1.8 MPa (264 psi)	175 Â°C	347 Â°F	ISO 75-1, -2
Vicat Softening Point	212 Â°C @Load 5.10 kg	414 Â°F @Load 11.2 lb	120Â°C/hour; ISO 306
Flammability, UL94	V-2 @Thickness 1.60 mm	V-2 @Thickness 0.0630 in	
	V-2 @Thickness 0.800 mm	V-2 @Thickness 0.0315 in	
Oxygen Index	30 %	30 %	Method A; ISO 4589-2
Glow Wire Test	775 Â°C @Diameter 0.750 mm	1430 Â°F @Diameter 0.0295 in	GWIT; IEC 60695-2-13
	960 Â°C @Diameter 0.800 mm	1760 Â°F @Diameter 0.0315 in	GWFI; IEC 60695-2-12
	960 Â°C @Diameter 1.60 mm	1760 Â°F @Diameter 0.0630 in	GWFI; IEC 60695-2-12

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	d.a.m.; IEC 60093
Surface Resistance	1.00e+13 ohm	1.00e+13 ohm	d.a.m.; IEC 60093
Dielectric Strength	38.0 kV/mm @Thickness 1.00 mm	965 kV/in @Thickness 0.0394 in	d.a.m.; IEC 60243-1
	Comparative Tracking Index	550 V	550 V

Processing Properties	Metric	English	Comments
Melt Temperature	250 - 270 Â°C	482 - 518 Â°F	
	260 Â°C	500 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	

Processing Properties	Metric	English	Comments
Dry Time	2 - 6 hour	2 - 6 hour	
Moisture Content	0.0030 - 0.0070 %	0.0030 - 0.0070 %	residual; Karl Fischer Test

Descriptive Properties	Value	Comments
ISO Shortname	ISO 1874-PA 6, GFHR, 14-080, GF30; ISO 1043-PA GF FR(30)	

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