

Lanxess Durethan® A 30 S FN31 000000 Nylon 66, Flame Retardant

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66, Unreinforced, Flame Retardant

Material Notes:

PA 66, non-reinforced, injection molding, halogen-free flame retardant, improved flowability Information provided by LANXESS.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Lanxess-Durethan-A-30-S-FN31-000000-Nylon-66-Flame-Retardant.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.169 g/cc	1.169 g/cc	ISO 1183
Linear Mold Shrinkage, Flow	0.0010 cm/cm	0.0010 in/in	Post-shrinkage, 60x60x2; 120Å°C; 4 hour; ISO 294-4
	0.011 cm/cm	0.011 in/in	60x60x2; 270Å°C / WZ 80Å°C; 600 bar; ISO 294-4
Linear Mold Shrinkage, Transverse	0.0010 cm/cm	0.0010 in/in	Post-shrinkage, 60x60x2; 120Å°C; 4 hour; ISO 294-4
	0.011 cm/cm	0.011 in/in	60x60x2; 270Å°C / WZ 80Å°C; 600 bar; ISO 294-4

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	50.0 MPa	7250 psi	cond.; ISO 527-1, -2; 50 mm/min
	85.0 MPa	12300 psi	d.a.m.; ISO 527-1, -2; 50 mm/min
Elongation at Yield	4.1 %	4.1 %	d.a.m.; ISO 527-1, -2
	>= 20 %	>= 20 %	cond.; ISO 527-1, -2
Tensile Modulus	1.50 GPa	218 ksi	cond.; ISO 527-1, -2; 1 mm/min
	3.80 GPa	551 ksi	d.a.m.; ISO 527-1, -2; 1 mm/min
Flexural Strength	55.0 MPa	7980 psi	cond., 2 mm/min; ISO 178-A
	@Strain 7.80 %	@Strain 7.80 %	
	125 MPa	18100 psi	d.a.m., 2 mm/min; ISO 178-A
	@Strain 5.80 %	@Strain 5.80 %	
Flexural Yield Strength	40.0 MPa	5800 psi	cond., 2 mm/min; ISO 178-A
	@Strain 3.50 %	@Strain 3.50 %	
	120 MPa	17400 psi	d.a.m., 2 mm/min; ISO 178-A
	@Strain 3.50 %	@Strain 3.50 %	
Flexural Modulus	1.60 GPa	232 ksi	cond., 2 mm/min; ISO 178-A

Mechanical Properties	Metric ^{1)a}	English	Comments ¹⁾ in/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
	<= 10.0 kJ/m ²	<= 4.76 ft-lb/in ²	cond.; ISO 180-1A
Izod Impact, Unnotched (ISO)	55.0 kJ/m ² @Temperature 23.0 Â°C	26.2 ft-lb/in ² @Temperature 73.4 Â°F	d.a.m.; ISO 180-1U
	55.0 kJ/m ² @Temperature -30.0 Â°C	26.2 ft-lb/in ² @Temperature -22.0 Â°F	d.a.m.; ISO 180-1U
	60.0 kJ/m ² @Temperature -30.0 Â°C	28.6 ft-lb/in ² @Temperature -22.0 Â°F	cond.; ISO 180-1U
	NB @Temperature 23.0 Â°C	NB @Temperature 73.4 Â°F	cond.; ISO 180-1U
Charpy Impact Unnotched	5.00 J/cm ² @Temperature -30.0 Â°C	23.8 ft-lb/in ² @Temperature -22.0 Â°F	d.a.m.; ISO 179-1eU
	6.00 J/cm ² @Temperature 23.0 Â°C	28.6 ft-lb/in ² @Temperature 73.4 Â°F	d.a.m.; ISO 179-1eU
	8.00 J/cm ² @Temperature -30.0 Â°C	38.1 ft-lb/in ² @Temperature -22.0 Â°F	cond.; ISO 179-1eU
	NB @Temperature 23.0 Â°C	NB @Temperature 73.4 Â°F	cond.; ISO 179-1eU
Charpy Impact, Notched	<= 1.00 J/cm ²	<= 4.76 ft-lb/in ²	d.a.m.; ISO 179-1eA
	<= 1.00 J/cm ²	<= 4.76 ft-lb/in ²	cond.; ISO 179-1eA

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	80.0 Âµm/m-Â°C @Temperature 23.0 - 55.0 Â°C	44.4 Âµin/in-Â°F @Temperature 73.4 - 131 Â°F	ISO 11359-1, -2
CTE, linear, Transverse to Flow	70.0 Âµm/m-Â°C @Temperature 23.0 -	38.9 Âµin/in-Â°F @Temperature 73.4 -	ISO 11359-1, -2

Thermal Properties	55.0 Å°C Metric	131 Å°F English	Comments
Melting Point	265 Å°C	509 Å°F	10Å°C/min; ISO 11357-1, -3
Deflection Temperature at 0.46 MPa (66 psi)	212 Å°C	414 Å°F	ISO 75-1, -2
Deflection Temperature at 1.8 MPa (264 psi)	80.0 Å°C	176 Å°F	ISO 75-1, -2
Vicat Softening Point	230 Å°C @Load 5.10 kg	446 Å°F @Load 11.2 lb	120Å°C/hour; ISO 306
Flammability, UL94	V-0 @Thickness 0.400 mm	V-0 @Thickness 0.0157 in	
Oxygen Index	34 %	34 %	Method A; ISO 4589-2
Glow Wire Test	775 Å°C @Diameter 0.400 mm	1430 Å°F @Diameter 0.0157 in	GWIT; IEC 60695-2-13
	960 Å°C @Diameter 0.400 mm	1760 Å°F @Diameter 0.0157 in	GWFI; IEC 60695-2-12

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+13 ohm-cm	1.00e+13 ohm-cm	cond.; IEC 60093
	1.00e+14 ohm-cm	1.00e+14 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	4.0 @Frequency 100 Hz	4.0 @Frequency 100 Hz	d.a.m.; IEC 60250
	4.0 @Frequency 1.00e+6 Hz	4.0 @Frequency 1.00e+6 Hz	d.a.m.; IEC 60250
	4.0 @Frequency 1.00e+6 Hz	4.0 @Frequency 1.00e+6 Hz	cond.; IEC 60250
	8.0 @Frequency 100 Hz	8.0 @Frequency 100 Hz	cond.; IEC 60250
Dielectric Strength	25.0 kV/mm @Thickness 1.00 mm	635 kV/in @Thickness 0.0394 in	cond.; IEC 60243-1

Electrical Properties	30.0 kV/mm Metric	762 kV/in English	Comments d.a.m.; IEC 60243-1
	@Thickness 1.00 mm	@Thickness 0.0394 in	
Dissipation Factor	0.012	0.012	d.a.m.; IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.019	0.019	d.a.m.; IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	0.055	0.055	cond.; IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	0.20	0.20	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 Â°C	500 Â°F	for test specimens; ISO 294
	260 - 270 Â°C	500 - 518 Â°F	
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	
Dry Time	2 - 6 hour	2 - 6 hour	
Moisture Content	0.030 - 0.070 %	0.030 - 0.070 %	residual; Karl Fischer Test

Descriptive Properties	Value	Comments
ISO Shortname	ISO1874-PA 66, GFHR, 12-040; ISO 1043 PA FR(30)	

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