

Lanxess Durethan® AKV 30 000000 Nylon 66, Glass Fiber Reinforced

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66, 30% Glass Fiber Filled

Material Notes:

PA 66, 30% glass fibers, injection molding Information provided by LANXESS.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Lanxess-Durethan-AKV-30-000000-Nylon-66-Glass-Fiber-Reinforced.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.36 g/cc	1.36 g/cc	ISO 1183
Bulk Density	0.700 g/cc	0.0253 lb/in ³	ISO 60
Moisture Absorption at Equilibrium	2.0 %	2.0 %	50% RH; ISO 62
Water Absorption at Saturation	5.5 %	5.5 %	ISO 62
Linear Mold Shrinkage, Flow	0.00040 cm/cm	0.00040 in/in	Post-shrinkage, 150x105x3; 120°C; 4 hour; ISO 2577
	0.0035 cm/cm	0.0035 in/in	150x105x3; 280°C / MT 80°C; 400 bar; ISO 2577
Linear Mold Shrinkage, Transverse	0.00050 cm/cm	0.00050 in/in	Post-shrinkage, 150x105x3; 120°C; 4 hour; ISO 2577
	0.0146 cm/cm	0.0146 in/in	150x105x3; 280°C / MT 80°C; 400 bar; ISO 2577

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	130 MPa	18900 psi	cond.; ISO 2039-1
	230 MPa	33400 psi	d.a.m.; ISO 2039-1
Tensile Strength at Break	125 MPa	18100 psi	cond.; ISO 527-1, -2; 5 mm/min
	185 MPa	26800 psi	d.a.m.; ISO 527-1, -2; 5 mm/min
Elongation at Break	3.0 %	3.0 %	d.a.m.; ISO 527-1, -2; 5 mm/min
	6.0 %	6.0 %	cond.; ISO 527-1, -2; 5 mm/min
Tensile Modulus	7.00 GPa	1020 ksi	cond.; ISO 527-1, -2; 1 mm/min
	10.6 GPa	1540 ksi	d.a.m.; ISO 527-1, -2; 1 mm/min
Flexural Strength	200 MPa	29000 psi	cond., 2 mm/min; ISO 178-A
	@Strain 6.00 %	@Strain 6.00 %	
	290 MPa	42100 psi	d.a.m., 2 mm/min; ISO 178-A

Mechanical Properties	@Strain 4.00 % Metric	@Strain 4.00 % English	Comments
Flexural Yield Strength	165 MPa	23900 psi	cond., 2 mm/min; ISO 178-A
	@Strain 3.50 %	@Strain 3.50 %	
Flexural Modulus	5.90 GPa	856 ksi	cond., 2 mm/min; ISO 178-A
	8.40 GPa	1220 ksi	
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	cond.; 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	
	<= 10.0 kJ/m ²	<= 4.76 ft-lb/in ²	cond.; ISO 180-1A
	@Temperature -40.0 °C	@Temperature -40.0 °F	
Charpy Impact Unnotched	7.00 J/cm ²	33.3 ft-lb/in ²	d.a.m.; ISO 179-1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	7.00 J/cm ²	33.3 ft-lb/in ²	cond.; ISO 179-1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	9.00 J/cm ²	42.8 ft-lb/in ²	d.a.m.; ISO 179-1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	9.00 J/cm ²	42.8 ft-lb/in ²	cond.; ISO 179-1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
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	cond.; ISO 179-1eA

Mechanical Properties	Metric @Temperature -30.0 Â°C	English @Temperature -22.0 Â°F	Comments
	1.50 J/cmÂ²	7.14 ft-lb/inÂ²	cond.; ISO 179-1eA
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	25.0 Âµm/m-Â°C @Temperature 23.0 - 55.0 Â°C	13.9 Âµin/in-Â°F @Temperature 73.4 - 131 Â°F	ISO 11359-1, -2
CTE, linear, Transverse to Flow	100 Âµm/m-Â°C @Temperature 23.0 - 55.0 Â°C	55.6 Âµin/in-Â°F @Temperature 73.4 - 131 Â°F	ISO 11359-1, -2
Melting Point	263 Â°C	505 Â°F	10Â°C/min; ISO 11357-1, -3
Deflection Temperature at 0.46 MPa (66 psi)	250 Â°C	482 Â°F	ISO 75-1, -2
Deflection Temperature at 1.8 MPa (264 psi)	250 Â°C	482 Â°F	ISO 75-1, -2
Deflection Temperature at 8.0 MPa	135 Â°C	275 Â°F	ISO 75-1, -2
Vicat Softening Point	>= 230 Â°C @Load 5.10 kg	>= 446 Â°F @Load 11.2 lb	120Â°C/hour; ISO 306
Flammability, UL94	HB @Thickness 1.60 mm	HB @Thickness 0.0630 in	
	HB @Thickness 3.20 mm	HB @Thickness 0.126 in	
Oxygen Index	23 %	23 %	Method A; ISO 4589-2
Glow Wire Test	600 Â°C @Diameter 2.00 mm	1110 Â°F @Diameter 0.0787 in	GWIT; IEC 60695-2-13

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+12 ohm-cm	1.00e+12 ohm-cm	cond.; IEC 60093
	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	cond.; IEC 60093
	1.00e+14 ohm	1.00e+14 ohm	d.a.m.; IEC 60093
	4.0	4.0	

Dielectric Constant Electrical Properties	Metric @Frequency 100 Hz	English @Frequency 100 Hz	d.a.m.; IEC 60250 Comments
	4.0	4.0	
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	d.a.m.; IEC 60250
	4.0	4.0	
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	cond.; IEC 60250
	10	10	
	@Frequency 100 Hz	@Frequency 100 Hz	cond.; IEC 60250
Dielectric Strength	35.0 kV/mm	889 kV/in	
	@Thickness 1.00 mm	@Thickness 0.0394 in	cond.; IEC 60243-1
	40.0 kV/mm	1020 kV/in	
	@Thickness 1.00 mm	@Thickness 0.0394 in	d.a.m.; IEC 60243-1
Dissipation Factor	0.0090	0.0090	
	@Frequency 100 Hz	@Frequency 100 Hz	d.a.m.; IEC 60250
	0.018	0.018	
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	d.a.m.; IEC 60250
	0.080	0.080	
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	cond.; IEC 60250
	0.27	0.27	
	@Frequency 100 Hz	@Frequency 100 Hz	cond.; IEC 60250
Comparative Tracking Index	600 V	600 V	d.a.m.; Solution A; IEC 60112

Processing Properties	Metric	English	Comments
Melt Temperature	280 - 300 Â°C	536 - 572 Â°F	
	290 Â°C	554 Â°F	for test specimens; ISO 294
Mold Temperature	80.0 Â°C	176 Â°F	for test specimens; ISO 294
	80.0 - 120 Â°C	176 - 248 Â°F	
Drying Temperature	80.0 Â°C	176 Â°F	
Dry Time	2 - 6 hour	2 - 6 hour	

Moisture Content	0.030 - 0.12 %	0.030 - 0.12 %	residual: Karl Fischer Test
Processing Properties	Metric	English	Comments

Descriptive Properties	Value	Comments
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ISO Shortname	ISO 1874-PA, 66, 14-110, GF30
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Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China