

Lanxess Durethan® AKV 15 H3.0 000000 Nylon 66, 15% Glass Fibers

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66, 20% Glass Fiber Filled

Material Notes:

PA 66, 15% glass fibers, injection molding, heat-ageing stabilized

Order this product through the following link:

http://www.lookpolymers.com/polymer_Lanxess-Durethan-AKV-15-H30-000000-Nylon-66-15-Glass-Fibers.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.239 g/cc	1.239 g/cc	ISO 1183
Bulk Density	0.700 g/cc	0.0253 lb/in ³	ISO 60
Moisture Absorption at Equilibrium	2.4 %	2.4 %	50% RH; ISO 62
Water Absorption at Saturation	7.0 %	7.0 %	ISO 62
Linear Mold Shrinkage, Flow	0.0070 cm/cm	0.0070 in/in	Mold Temp 80°C; Melt Temp 280°C; 600 bar; ISO 294-4
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Linear Mold Shrinkage, Transverse	0.010 cm/cm	0.010 in/in	Mold Temp 80°C; Melt Temp 280°C; 600 bar; ISO 294-4
	@Thickness 2.00 mm	@Thickness 0.0787 in	

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	90.0 MPa	13100 psi	Conditioned; ISO 2039-1
	190 MPa	27600 psi	ISO 2039-1
Tensile Strength at Break	73.0 MPa	10600 psi	Conditioned; ISO 527-1,-2
	125 MPa	18100 psi	ISO 527-1,-2
Elongation at Break	2.8 %	2.8 %	ISO 527-1,-2
	18 %	18 %	Conditioned; ISO 527-1,-2
Tensile Modulus	3.30 GPa	479 ksi	Conditioned; ISO 527-1,-2
	5.90 GPa	856 ksi	ISO 527-1,-2
Flexural Strength	125 MPa	18100 psi	Conditioned; ISO 178
	@Strain 7.00 %	@Strain 7.00 %	
	200 MPa	29000 psi	ISO 178
	@Strain 4.50 %	@Strain 4.50 %	
Flexural Yield Strength	90.0 MPa	13100 psi	Conditioned; ISO 178

Mechanical Properties	@Strain 3.50 % Metric	@Strain 3.50 % English	Comments
	180 MPa	26100 psi	ISO 178
	@Strain 3.50 %	@Strain 3.50 %	
Flexural Modulus	2.90 GPa	421 ksi	Conditioned; ISO 178
	5.30 GPa	769 ksi	ISO 178
Izod Impact, Notched (ISO)	<= 10.0 kJ/mÂ² @Temperature 23.0 Â°C	<= 4.76 ft-lb/inÂ² @Temperature 73.4 Â°F	ISO 180-1A
	<= 10.0 kJ/mÂ² @Temperature 23.0 Â°C	<= 4.76 ft-lb/inÂ² @Temperature 73.4 Â°F	Conditioned; ISO 180-1A
	<= 10.0 kJ/mÂ² @Temperature -30.0 Â°C	<= 4.76 ft-lb/inÂ² @Temperature -22.0 Â°F	ISO 180-1A
	<= 10.0 kJ/mÂ² @Temperature -30.0 Â°C	<= 4.76 ft-lb/inÂ² @Temperature -22.0 Â°F	Conditioned; ISO 180-1A
Izod Impact, Unnotched (ISO)	30.0 kJ/mÂ² @Temperature 23.0 Â°C	14.3 ft-lb/inÂ² @Temperature 73.4 Â°F	ISO 180-1U
	30.0 kJ/mÂ² @Temperature -30.0 Â°C	14.3 ft-lb/inÂ² @Temperature -22.0 Â°F	ISO 180-1U
	30.0 kJ/mÂ² @Temperature -30.0 Â°C	14.3 ft-lb/inÂ² @Temperature -22.0 Â°F	Conditioned; ISO 180-1U
	75.0 kJ/mÂ² @Temperature 23.0 Â°C	35.7 ft-lb/inÂ² @Temperature 73.4 Â°F	Conditioned; ISO 180-1U
Charpy Impact Unnotched	3.50 J/cmÂ² @Temperature 23.0 Â°C	16.7 ft-lb/inÂ² @Temperature 73.4 Â°F	ISO 179-1eU
	3.50 J/cmÂ² @Temperature -30.0 Â°C	16.7 ft-lb/inÂ² @Temperature -22.0 Â°F	ISO 179-1eU
	4.00 J/cmÂ²	19.0 ft-lb/inÂ²	

Mechanical Properties	Metric	English	Comments
	5.00 J/cm ²	23.8 ft-lb/in ²	Conditioned; 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	ISO 179-1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	<= 1.00 J/cm ²	<= 4.76 ft-lb/in ²	Conditioned; ISO 179-1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	<= 1.00 J/cm ²	<= 4.76 ft-lb/in ²	ISO 179-1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	<= 1.00 J/cm ²	<= 4.76 ft-lb/in ²	Conditioned; ISO 179-1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Puncture Energy	1.50 J	1.11 ft-lb	ISO 6603-2
	@Load <=58.9 kg, Temperature -30.0 °C	@Load <=130 lb, Temperature -22.0 °F	
	1.70 J	1.25 ft-lb	ISO 6603-2
	@Load <=62.9 kg, Temperature 23.0 °C	@Load <=139 lb, Temperature 73.4 °F	
	2.30 J	1.70 ft-lb	Conditioned; ISO 6603-2
	@Load <=140.5 kg, Temperature 23.0 °C	@Load <=309.8 lb, Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	40.0 Åµm/m-Å°C	22.2 Åµin/in-Å°F	ISO 11359-1,-2
CTE, linear, Transverse to Flow	90.0 Åµm/m-Å°C	50.0 Åµin/in-Å°F	ISO 11359-1,-2
Melting Point	263 Å°C	505 Å°F	ISO 11357-1,-3
Deflection Temperature at 0.46 MPa (66 psi)	>= 250 Å°C	>= 482 Å°F	ISO 75-1,-2
Deflection Temperature at 1.8 MPa (264 psi)	230 Å°C	446 Å°F	ISO 75-1,-2
Deflection Temperature at 8.0 MPa	70.0 Å°C	158 Å°F	ISO 75-1,-2
Vicat Softening Point	>= 230 Å°C	>= 446 Å°F	50Å°C/h; ISO 306

Thermal Properties	Metric ≥ 230 Â°C	English ≥ 446 Â°F	Comments T20A C/B, ISO 306
	@Load 5.10 kg	@Load 11.2 lb	
Flammability, UL94	HB	HB	
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	HB	HB	
	@Thickness 3.20 mm	@Thickness 0.126 in	
Glow Wire Test	650 Â°C	1200 Â°F	IEC 60695-2-12
Shrinkage	0.10 %	0.10 %	Molding Post-shrinkage; ISO 294-4
	@Temperature 120 Â°C, Time 14400 sec	@Temperature 248 Â°F, Time 4.00 hour	
	0.20 %	0.20 %	Molding Post-shrinkage; ISO 294-4
	@Temperature 120 Â°C, Time 14400 sec	@Temperature 248 Â°F, Time 4.00 hour	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	IEC 60093
Surface Resistance	1.00e+15 ohm	1.00e+15 ohm	IEC 60093
Dielectric Constant	3.8	3.8	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	4.2	4.2	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	38.0 kV/mm	965 kV/in	IEC 60243-1
	@Thickness 1.00 mm	@Thickness 0.0394 in	
Dissipation Factor	0.23	0.23	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.25	0.25	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	550 V	550 V	Solution A, Rating; IEC 60112

Processing Properties	Metric	English	Comments
Melt Temperature	290 Â°C	554 Â°F	Processing conditions for test specimens; ISO 294

Processing Properties	280 - 300 Â°C Metric	536 - 572 Â°F English	Recommended Comments
Mold Temperature	80.0 Â°C	176 Â°F	Processing conditions for test specimens; ISO 294
	80.0 - 120 Â°C	176 - 248 Â°F	Recommended
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; Acc. To Karl Fischer

Descriptive Properties	Value	Comments
Flammability	Passed US-FMVSS302	ISO 3795
ISO Shortname	ISO 1874-PA 66,GHR,14-060,GF15	

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