

Lanxess Durethan® AKV 35 H2.0 SR1 901510 Nylon 66, Glass Fiber Reinforced

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66, 40% Glass Fiber Filled

Material Notes:

PA 66, 35% glass fibers, injection molding, heat-aging stabilized, improved surface finish Information provided by LANXESS.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Lanxess-Durethan-AKV-35-H20-SR1-901510-Nylon-66-Glass-Fiber-Reinforced.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.41 g/cc	1.41 g/cc	ISO 1183
Moisture Absorption at Equilibrium	1.8 %	1.8 %	50% RH; ISO 62
Water Absorption at Saturation	5.0 %	5.0 %	ISO 62
Linear Mold Shrinkage, Flow	0.00030 cm/cm	0.00030 in/in	Post-shrinkage, 150x105x3; 120Â°C; 4 hour; ISO 2577
	0.00070 cm/cm	0.00070 in/in	Post-shrinkage, 60x60x2; 120Â°C; 4 hour; ISO 294-4
	0.0032 cm/cm	0.0032 in/in	60x60x2; 300Â°C / MT 80Â°C; 600 bar; ISO 294-4
	0.0035 cm/cm	0.0035 in/in	150x105x3; 300Â°C / MT 80Â°C; 400 bar; ISO 2577
Linear Mold Shrinkage, Transverse	0.00040 cm/cm	0.00040 in/in	Post-shrinkage, 150x105x3; 120Â°C; 4 hour; ISO 2577
	0.00090 cm/cm	0.00090 in/in	Post-shrinkage, 60x60x2; 120Â°C; 4 hour; ISO 294-4
	0.010 cm/cm	0.010 in/in	60x60x2; 300Â°C / MT 80Â°C; 600 bar; ISO 294-4
	0.014 cm/cm	0.014 in/in	150x105x3; 300Â°C / MT 80Â°C; 400 bar; ISO 2577

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	130 MPa	18900 psi	cond.; ISO 527-1, -2; 5 mm/min
	190 MPa	27600 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
	5.0 %	5.0 %	cond.; ISO 527-1, -2; 5 mm/min
Tensile Modulus	7.50 GPa	1090 ksi	cond.; ISO 527-1, -2; 1 mm/min
	11.2 GPa	1620 ksi	d.a.m.; ISO 527-1, -2; 1 mm/min

Mechanical Properties	200 MPa Metric	29000 psi English	Comments
Mechanical Properties	@Strain 6.00 %	@Strain 6.00 %	cond., 2 mm/min; ISO 178-A
	295 MPa	42800 psi	d.a.m., 2 mm/min; ISO 178-A
	@Strain 4.00 %	@Strain 4.00 %	
Flexural Yield Strength	170 MPa	24700 psi	cond., 2 mm/min; ISO 178-A
	@Strain 3.50 %	@Strain 3.50 %	
Flexural Modulus	6.70 GPa	972 ksi	cond., 2 mm/min; ISO 178-A
	10.5 GPa	1520 ksi	d.a.m., 2 mm/min; ISO 178-A
Izod Impact, Notched (ISO)	<= 10.0 kJ/mÂ²	<= 4.76 ft-lb/inÂ²	d.a.m.; ISO 180-1A
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
	<= 10.0 kJ/mÂ²	<= 4.76 ft-lb/inÂ²	cond.; ISO 180-1A
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
	<= 10.0 kJ/mÂ²	<= 4.76 ft-lb/inÂ²	d.a.m.; ISO 180-1A
	@Temperature -40.0 Â°C	@Temperature -40.0 Â°F	
	<= 10.0 kJ/mÂ²	<= 4.76 ft-lb/inÂ²	cond.; ISO 180-1A
	@Temperature -40.0 Â°C	@Temperature -40.0 Â°F	
Izod Impact, Unnotched (ISO)	65.0 kJ/mÂ²	30.9 ft-lb/inÂ²	ISO 180-1U
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
	75.0 kJ/mÂ²	35.7 ft-lb/inÂ²	ISO 180-1U
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
Charpy Impact Unnotched	7.00 J/cmÂ²	33.3 ft-lb/inÂ²	d.a.m.; ISO 179-1eU
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
	7.50 J/cmÂ²	35.7 ft-lb/inÂ²	cond.; ISO 179-1eU
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
	8.00 J/cmÂ²	38.1 ft-lb/inÂ²	d.a.m.; ISO 179-1eU
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
	9.00 J/cmÂ²		

Mechanical Properties	Metric	English	Comments
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
Charpy Impact, Notched	1.00 J/cmÂ²	4.76 ft-lb/inÂ²	d.a.m.; ISO 179-1eA
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
	1.00 J/cmÂ²	4.76 ft-lb/inÂ²	cond.; ISO 179-1eA
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
	1.20 J/cmÂ²	5.71 ft-lb/inÂ²	d.a.m.; ISO 179-1eA
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
	2.00 J/cmÂ²	9.52 ft-lb/inÂ²	cond.; ISO 179-1eA
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
Tensile Creep Modulus, 1 hour	7000 MPa	1.02e+6 psi	ISO 899-1
Tensile Creep Modulus, 1000 hours	5800 MPa	841000 psi	ISO 899-1

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	20.0 Âµm/m-Â°C	11.1 Âµin/in-Â°F	ISO 11359-1, -2
	@Temperature 23.0 - 55.0 Â°C	@Temperature 73.4 - 131 Â°F	
CTE, linear, Transverse to Flow	100 Âµm/m-Â°C	55.6 Âµin/in-Â°F	ISO 11359-1, -2
	@Temperature 23.0 - 55.0 Â°C	@Temperature 73.4 - 131 Â°F	
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
Vicat Softening Point	>= 230 Â°C	>= 446 Â°F	120Â°C/hour; 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	
Oxygen Index	23 %	23 %	Method A; ISO 4589-2

Thermal Properties	Metric 600 A °C	English 1100 A °F	Comments
Glow Wire Test	@Diameter 2.00 mm	@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+15 ohm	1.00e+15 ohm	d.a.m.; IEC 60093
Dielectric Constant	4.0	4.0	d.a.m.; IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	4.0	4.0	d.a.m.; IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	4.0	4.0	cond.; IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	10	10	cond.; IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	30.0 kV/mm	762 kV/in	cond.; IEC 60243-1
	@Thickness 1.00 mm	@Thickness 0.0394 in	
	35.0 kV/mm	889 kV/in	d.a.m.; IEC 60243-1
	@Thickness 1.00 mm	@Thickness 0.0394 in	
Dissipation Factor	0.015	0.015	d.a.m.; IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	0.065	0.065	cond.; IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	0.11	0.11	d.a.m.; IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.21	0.21	cond.; IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	

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

Descriptive Properties	Value	Comments
ISO Shortname	ISO 1874-PA 66, GHR, 14-110, GF35	

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