Lanxess DurethanÂ® AKV 35 HR H2.0 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, hydrolysis stabilizedInformation provided by LANXESS.

Order this product through the following link:
http://www.lookpolymers.com/polymer_Lanxess-Durethan-AKV-35-HR-H20-901510-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	1.7 %	1.7 %	50% RH; ISO 62
Water Absorption at Saturation	5.2 %	5.2 %	ISO 62
Linear Mold Shrinkage, Flow	0.00060 cm/cm	0.00060 in/in	Post-shrinkage, 60x60x2; 120Â°C; 4 hour; ISO 294-4
	0.0038 cm/cm	0.0038 in/in	60x60x2; 300Â°C / MT 80Â°C; 600 bar; ISO 294-4
Linear Mold Shrinkage, Transverse	0.00090 cm/cm	0.00090 in/in	Post-shrinkage, 60x60x2; 120Â°C; 4 hour; ISO 294-4
	0.0105 cm/cm	0.0105 in/in	60x60x2; 300Â°C / MT 80Â°C; 600 bar; ISO 294-4

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	135 MPa	19600 psi	cond.; ISO 527-1, -2; 5 mm/min
	195 MPa	28300 psi	d.a.m.; ISO 527-1, -2; 5 mm/min
Elongation at Break	3.1 %	3.1 %	d.a.m.; ISO 527-1, -2; 5 mm/min
	6.0 %	6.0 %	cond.; ISO 527-1, -2; 5 mm/min
Tensile Modulus	7.80 GPa	1130 ksi	cond.; ISO 527-1, -2; 1 mm/min
	11.5 GPa	1670 ksi	d.a.m.; ISO 527-1, -2; 1 mm/min
Flexural Strength	210 MPa @Strain 6.00 %	30500 psi @Strain 6.00 %	cond., 2 mm/min; ISO 178-A
	305 MPa @Strain 3.80 %	44200 psi @Strain 3.80 %	d.a.m., 2 mm/min; ISO 178-A
Flexural Yield Strength	180 MPa @Strain 3.50 %	26100 psi @Strain 3.50 %	cond., 2 mm/min; ISO 178-A
Flexural Modulus	7.00 GPa	1020 ksi	cond., 2 mm/min; ISO 178-A

Mechanical Properties	Metric	English	Comments
	10.7 GPa	1550 ksi	d.a.m.; 2 mm/min; ISO 178-A
Izod Impact, Notched (ISO)	<= 10.0 kJ/mÂ² @Temperature 23.0 Â°C	<= 4.76 ft-lb/inÂ² @Temperature 73.4 Â°F	d.a.m.; ISO 180-1A
	<= 10.0 kJ/mÂ² @Temperature 23.0 Â°C	<= 4.76 ft-lb/inÂ² @Temperature 73.4 Â°F	cond.; ISO 180-1A
	10.0 kJ/mÂ² @Temperature -30.0 Â°C	4.76 ft-lb/inÂ² @Temperature -22.0 Â°F	d.a.m.; ISO 180-1A
	10.0 kJ/mÂ² @Temperature -30.0 Â°C	4.76 ft-lb/inÂ² @Temperature -22.0 Â°F	cond.; ISO 180-1A
Izod Impact, Unnotched (ISO)	65.0 kJ/mÂ² @Temperature -30.0 Â°C	30.9 ft-lb/inÂ² @Temperature -22.0 Â°F	d.a.m.; ISO 180-1U
	75.0 kJ/mÂ² @Temperature 23.0 Â°C	35.7 ft-lb/inÂ² @Temperature 73.4 Â°F	d.a.m.; ISO 180-1U
Charpy Impact Unnotched	7.50 J/cmÂ² @Temperature -30.0 Â°C	35.7 ft-lb/inÂ² @Temperature -22.0 Â°F	d.a.m.; ISO 179-1eU
	8.00 J/cmÂ² @Temperature -30.0 Â°C	38.1 ft-lb/inÂ² @Temperature -22.0 Â°F	cond.; ISO 179-1eU
	8.50 J/cmÂ² @Temperature 23.0 Â°C	40.4 ft-lb/inÂ² @Temperature 73.4 Â°F	d.a.m.; ISO 179-1eU
	8.50 J/cmÂ² @Temperature 23.0 Â°C	40.4 ft-lb/inÂ² @Temperature 73.4 Â°F	cond.; ISO 179-1eU
Charpy Impact, Notched	<= 1.00 J/cmÂ² @Temperature -30.0 Â°C	<= 4.76 ft-lb/inÂ² @Temperature -22.0 Â°F	d.a.m.; ISO 179-1eA
	<= 1.00 J/cmÂ² @Temperature -30.0 Â°C	<= 4.76 ft-lb/inÂ² @Temperature -22.0 Â°F	cond.; ISO 179-1eA

Mechanical Properties	Metric	English	Comments
	<= 1.00 J/cmÂ² @Temperature -40.0 Â°C	<= 4.76 ft-lb/inÂ² @Temperature -40.0 Â°F	d.a.m.; ISO 179-1eA
	<= 1.00 J/cmÂ² @Temperature -40.0 Â°C	<= 4.76 ft-lb/inÂ² @Temperature -40.0 Â°F	cond.; ISO 179-1eA
	1.30 J/cmÂ² @Temperature 23.0 Â°C	6.19 ft-lb/inÂ² @Temperature 73.4 Â°F	d.a.m.; ISO 179-1eA
	2.00 J/cmÂ² @Temperature 23.0 Â°C	9.52 ft-lb/inÂ² @Temperature 73.4 Â°F	cond.; ISO 179-1eA

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	20.0 Âµm/m-Â°C @Temperature 23.0 - 55.0 Â°C	11.1 Âµin/in-Â°F @Temperature 73.4 - 131 Â°F	ISO 11359-1, -2
CTE, linear, Transverse 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
Melting Point	262 Â°C	504 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)	245 Â°C	473 Â°F	ISO 75-1, -2
Vicat Softening Point	>= 230 Â°C @Load 5.10 kg	>= 446 Â°F @Load 11.2 lb	50Â°C/hour; ISO 306
	255 Â°C @Load 5.10 kg	491 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	26 %	26 %	Method A; ISO 4589-2
Glow Wire Test	650 Â°C @Diameter 2.00 mm	1200 Â°F @Diameter 0.0787 in	GWFI; IEC 60695-2-12

Thermal Properties	Metric	English	Comments
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+14 ohm	1.00e+14 ohm	d.a.m.; IEC 60093
Dielectric Constant	3.6 @Frequency 1.00e+6 Hz	3.6 @Frequency 1.00e+6 Hz	d.a.m.; IEC 60250
	3.9 @Frequency 100 Hz	3.9 @Frequency 100 Hz	d.a.m.; IEC 60250
Dielectric Strength	35.0 kV/mm @Thickness 1.00 mm	889 kV/in @Thickness 0.0394 in	d.a.m.; IEC 60243-1
Dissipation Factor	0.010 @Frequency 100 Hz	0.010 @Frequency 100 Hz	d.a.m.; IEC 60250
	0.015 @Frequency 1.00e+6 Hz	0.015 @Frequency 1.00e+6 Hz	d.a.m.; IEC 60250
Comparative Tracking Index	425 V	425 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	

Descriptive Properties	Value	Comments
Flammability Test	passed	ISO 3795, = 1.0 mm
ISO Shortname	ISO 1874-PA 66, GHRW, 14-110, GF30	

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