Lanxess DurethanÂ® AKV 40 H2.0 901510 Nylon 66, Glass Fiber Reinforced

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

Material Notes:

PA 66, 40% glass fibers, injection molding, heat-aging stabilizedInformation provided by LANXESS.

Order this product through the following link:
http://www.lookpolymers.com/polymer_Lanxess-Durethan-AKV-40-H20-901510-Nylon-66-Glass-Fiber-Reinforced.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.46 g/cc	1.46 g/cc	ISO 1183
Moisture Absorption at Equilibrium	1.7 %	1.7 %	50% RH; ISO 62
Water Absorption at Saturation	4.5 %	4.5 %	ISO 62
Linear Mold Shrinkage, Flow	0.00030 cm/cm	0.00030 in/in	Post-shrinkage, 60x60x2; 120Â°C; 4 hour; ISO 2577
	0.00050 cm/cm	0.00050 in/in	Post-shrinkage, 60x60x2; 120Â°C; 4 hour; ISO 294-4
	0.0026 cm/cm	0.0026 in/in	150x105x3; 300Â°C / MT 80Â°C; 400 bar; ISO 2577
	0.0034 cm/cm	0.0034 in/in	60x60x2; 300Â°C / MT 80Â°C; 600 bar; ISO 294-4
Linear Mold Shrinkage, Transverse	0.00030 cm/cm	0.00030 in/in	Post-shrinkage, 60x60x2; 120Â°C; 4 hour; ISO 2577
	0.00050 cm/cm	0.00050 in/in	Post-shrinkage, 60x60x2; 120Â°C; 4 hour; ISO 294-4
	0.0094 cm/cm	0.0094 in/in	60x60x2; 300Â°C / MT 80Â°C; 600 bar; ISO 294-4
	0.0133 cm/cm	0.0133 in/in	150x105x3; 300Â°C / MT 80Â°C; 400 bar; ISO 2577

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	145 MPa	21000 psi	cond.; ISO 527-1, -2; 5 mm/min
	210 MPa	30500 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	8.80 GPa	1280 ksi	cond.; ISO 527-1, -2; 1 mm/min
	13.0 GPa	1890 ksi	d.a.m.; ISO 527-1, -2; 1 mm/min
	240 MPa	34800 psi	

Mechanical Properties	Metric	English	Comments
Flexural Strength	@Strain 5.00 %	@Strain 5.00 %	cond., 2 mm/min; ISO 178-A
	320 MPa @Strain 4.00 %	46400 psi @Strain 4.00 %	d.a.m., 2 mm/min; ISO 178-A
Flexural Yield Strength	210 MPa @Strain 3.50 %	30500 psi @Strain 3.50 %	cond., 2 mm/min; ISO 178-A
Flexural Modulus	8.00 GPa	1160 ksi	cond., 2 mm/min; ISO 178-A
	12.0 GPa	1740 ksi	d.a.m., 2 mm/min; ISO 178-A
Izod Impact, Notched (ISO)	10.0 kJ/mÂ² @Temperature -30.0 Â°C	4.76 ft-lb/inÂ² @Temperature -22.0 Â°F	d.a.m.; ISO 180-1U
	10.0 kJ/mÂ² @Temperature -30.0 Â°C	4.76 ft-lb/inÂ² @Temperature -22.0 Â°F	cond.; ISO 180-1U
Charpy Impact Unnotched	8.00 J/cmÂ² @Temperature -30.0 Â°C	38.1 ft-lb/inÂ² @Temperature -22.0 Â°F	d.a.m.; ISO 179-1eU
	9.00 J/cmÂ² @Temperature 23.0 Â°C	42.8 ft-lb/inÂ² @Temperature 73.4 Â°F	d.a.m.; ISO 179-1eU
	9.00 J/cmÂ² @Temperature -30.0 Â°C	42.8 ft-lb/inÂ² @Temperature -22.0 Â°F	cond.; ISO 179-1eU
	10.0 J/cmÂ² @Temperature 23.0 Â°C	47.6 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
	1.20 J/cmÂ² @Temperature -30.0 Â°C	5.71 ft-lb/inÂ² @Temperature -22.0 Â°F	cond.; ISO 179-1eA
	1.50 J/cmÂ² @Temperature 23.0 Â°C	7.14 ft-lb/inÂ² @Temperature 73.4 Â°F	d.a.m.; ISO 179-1eA
	2.30 J/cmÂ²	10.9 ft-lb/inÂ²	cond.; ISO 179-1eA

Mechanical Properties	Metric	English	Comments
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
Tensile Creep Modulus, 1 hour	7700 MPa	1.12e+6 psi	cond.; ISO 899-1
Tensile Creep Modulus, 1000 hours	6800 MPa	986000 psi	cond.; ISO 899-1

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	90.0 Âµm/m-Â°C @Temperature 23.0 - 55.0 Â°C	50.0 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
Vicat Softening Point	>= 230 Â°C @Load 5.10 kg	>= 446 Â°F @Load 11.2 lb	120Â°C/hour; ISO 306
	>= 230 Â°C @Load 5.10 kg	>= 446 Â°F @Load 11.2 lb	50Â°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	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+14 ohm-cm	1.00e+14 ohm-cm	cond.; IEC 60093
	1.00e+17 ohm-cm	1.00e+17 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

Electrical Properties	Metric	English	Comments
Dielectric Constant	4.0	4.0	d.a.m.; IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	4.0 @Frequency 1.00e+6 Hz	4.0 @Frequency 1.00e+6 Hz	d.a.m.; IEC 60250
	4.5 @Frequency 1.00e+6 Hz	4.5 @Frequency 1.00e+6 Hz	cond.; IEC 60250
	10 @Frequency 100 Hz	10 @Frequency 100 Hz	cond.; IEC 60250
Dielectric Strength	35.0 kV/mm @Thickness 1.00 mm	889 kV/in @Thickness 0.0394 in	cond.; IEC 60243-1
	40.0 kV/mm @Thickness 1.00 mm	1020 kV/in @Thickness 0.0394 in	d.a.m.; IEC 60243-1
Dissipation Factor	0.011 @Frequency 100 Hz	0.011 @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
	0.065 @Frequency 1.00e+6 Hz	0.065 @Frequency 1.00e+6 Hz	cond.; IEC 60250
	0.235 @Frequency 100 Hz	0.235 @Frequency 100 Hz	cond.; IEC 60250
Comparative Tracking Index	525 V	525 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	

Processing Properties	Metric	English	Comments
Moisture Content	Value 0.12 %	Value 0.12 %	Tested by Karl Fischer Test

Descriptive Properties	Value	Comments
ISO Shortname	ISO-PA 66, MHR, 14-120, GF40	

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