

Wolf Kunststoff ZEDEX® ZX-750V5KF 055 Polymer Alloy. Fiber Reinforced

Category : Polymer , Thermoplastic

Material Notes:

Main Characteristics: Stiff; High elongation and yield stress; Low thermal expansion; Impact resistant
 Applications: Textile Machinery; Compressors; Hinges; Handling; Machine Tools; Automotive Technology
 Information provided by Zedex

Order this product through the following link:

http://www.lookpolymers.com/polymer_Wolf-Kunststoff-ZEDEX-ZX-750V5KF-055-Polymer-Alloy-Fiber-Reinforced.php

Physical Properties	Metric	English	Comments
Density	1.53 g/cc	0.0553 lb/in ³	ISO 1183
Water Absorption	0.20 % @Temperature 23.0 °C	0.20 % @Temperature 73.4 °F	RMC 93%; DIN EN ISO 62
Moisture Absorption at Equilibrium	0.40 %	0.40 %	DIN EN ISO 62

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	>= 100	>= 100	DIN 53505
Hardness, Shore D	90	90	DIN 53505
Ball Indentation Hardness	160 MPa	23200 psi	DIN 2039
Tensile Strength at Break	93.1 MPa	13500 psi	DIN EN ISO 527
Tensile Strength	93.1 MPa	13500 psi	DIN EN ISO 527
Tensile Stress	44.0 MPa @Strain 1.00 %, Time 3.60e+6 sec	6380 psi @Strain 1.00 %, Time 1000 hour	DIN 53444
Tensile Strength, Yield	61.0 MPa	8850 psi	Elastic Limit
Elongation at Break	6.8 %	6.8 %	Flexural; DIN EN ISO 178
	6.8 %	6.8 %	DIN EN ISO 527
Elongation at Yield	2.4 %	2.4 %	Elastic Yield Point
	4.3 %	4.3 %	Flexural; DIN EN ISO 178
	6.8 %	6.8 %	Elongation at Maximum Force; DIN EN ISO 527
Tensile Modulus	2.48 GPa	360 ksi	DIN EN ISO 527
Flexural Strength	177 MPa	25700 psi	Outer Fiber Stress at 3.5% Outer Fiber Strain; DIN EN ISO 178

Mechanical Properties	Metric ^{182 MPa}	English ^{26400 psi}	Comments ¹⁷⁸
	182 MPa	26400 psi	DIN EN ISO 178
Flexural Modulus	8.83 GPa	1280 ksi	DIN EN ISO 178
Compressive Strength	101 MPa	14600 psi	Elastic Limit
	147 MPa	21300 psi	break; DIN EN ISO 604
	147 MPa	21300 psi	DIN EN ISO 604
	61.0 MPa	8850 psi	
	@Time 3.60e+7 sec	@Time 10000 hour	
	95.0 MPa	13800 psi	
	@Time 360000 sec	@Time 100 hour	
	108 MPa	15700 psi	
	@Time 36.0 sec	@Time 0.0100 hour	
	83.0 MPa	12000 psi	DIN EN ISO 604
	@Strain 3.50 %	@Strain 3.50 %	
Compressive Modulus	1.95 GPa	283 ksi	DIN EN ISO 604
Fatigue Strength	55.0 MPa	7980 psi	1 Hz
	@# of Cycles 1.00e+6	@# of Cycles 1.00e+6	
K Factor (ISO)	0.10 µm/km	0.10 µm/km	
	@Temperature 20.0 °C	@Temperature 68.0 °F	
	0.70 µm/km	0.70 µm/km	
	@Temperature 100 °C	@Temperature 212 °F	
	2.2 µm/km	2.2 µm/km	
	@Temperature 200 °C	@Temperature 392 °F	
	2.9 µm/km	2.9 µm/km	
	@Temperature 240 °C	@Temperature 464 °F	
Charpy Impact Unnotched	5.90 J/cm ²	28.1 ft-lb/in ²	EN ISO 179/1eU
Charpy Impact, Notched	1.56 J/cm ²	7.42 ft-lb/in ²	EN ISO 179/1eA
Coefficient of Friction, Dynamic	0.11	0.11	Dry Operation
	@Temperature 100 °C	@Temperature 212 °F	
	0.16	0.16	

Mechanical Properties	Metric @ Temperature 20.0 °C	English @ Temperature 68.0 °F	Dry Operation Comments
Coefficient of Friction, Static	0.19 @Temperature 20.0 °C	0.19 @Temperature 68.0 °F	Dry Operation
Tensile Creep Modulus, 1000 hours	4320 MPa	627000 psi	At 1% Deformation; DIN 53444
Limiting Pressure Velocity	0.54883 MPa-m/sec	15669 psi-ft/min	v = 1m/min
	0.88333 MPa-m/sec	25219 psi-ft/min	v = 100m/min
	0.933 MPa-m/sec	26600 psi-ft/min	v = 200m/min
	1.415 MPa-m/sec	40400 psi-ft/min	v = 10m/min
Compression Set	4.4 %	4.4 %	Elastic Compression Limit
	10.9 %	10.9 %	Nominal Compressive Strain at Compressive Strength; DIN EN ISO 604
	10.9 %	10.9 %	Nominal Compressive Strain at Break; DIN EN ISO 604

Thermal Properties	Metric	English	Comments
CTE, linear	27.0 µm/m-°C @Temperature <=100 °C	15.0 µin/in-°F @Temperature <=212 °F	ISO E 830
	29.0 µm/m-°C @Temperature <=150 °C	16.1 µin/in-°F @Temperature <=302 °F	ISO E 831
Specific Heat Capacity	1.06 J/g-°C	0.253 BTU/lb-°F	DSC
Melting Point	390 °C	734 °F	DSC
Maximum Service Temperature, Air	250 °C	482 °F	Pressed Bushings
	280 °C	536 °F	Continuous
	320 °C	608 °F	Short Term (3h)
Deflection Temperature at 1.8 MPa (264 psi)	290 °C	554 °F	DIN EN ISO 75
Glass Transition Temp, Tg	240 °C	464 °F	DSC
Flammability, UL94	V-0	V-0	

Electrical Properties	Metric	English	Comments
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Volume Resistivity Electrical Properties	5.00e+6 ohm-cm Metric	5.00e+6 ohm-cm English	IEC 93 Comments
Surface Resistance	3.00e+6 ohm	3.00e+6 ohm	IEC 93
Dielectric Constant	3.4 @Frequency 110 Hz	3.4 @Frequency 110 Hz	IEC 250
Dielectric Strength	0.100 kV/mm	2.54 kV/in	IEC 243
Dissipation Factor	0.00090	0.00090	IEC 112
	0.080 @Frequency 1.00 Hz	0.080 @Frequency 1.00 Hz	

Descriptive Properties	Value	Comments
Alignment Adjustment	3	Nominal Scale: 1, low; 10, high
Chemical Sterilization	10	Nominal Scale: 1, low; 10, high
Color	Green	
Creep Resistance	6	Nominal Scale: 1, low; 10, high
Dimensional Stability with Thermal Expansion	10	Nominal Scale: 1, low; 10, high
Free from Silicon	Applicable	
Gamma-rays Radiation Sterilization	7	Nominal Scale: 1, low; 10, high
Injection Molded Parts	Applicable	
Machined Parts	Applicable	
Moist Heat Sterilization	6	Nominal Scale: 1, low; 10, high
Plastic Granules	Applicable	
Resistance Against dust, Dirt, Abrasive Substances	5	Nominal Scale: 1, low; 10, high
Resistance Against Hot Water	120	
Resistance to Chemicals	5	Nominal Scale: 1, low; 10, high
Resistant Against Disinfectant	Applicable	
Rods up to Øe (de)	Applicable	
ROHS/WEEE	Applicable	
Sheets up to Maximum Thickness	Applicable	
Sliding Velocity	350	

Descriptive Properties	Value	Comments
Suitable for Vacuum	Applicable	Scale: 1, low; 10, high
Tubes (hollow rods) up to Øe (de)	Applicable	
UV Rays Resistance	9	Nominal Scale: 1, low; 10, high

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