

## Wolf Kunststoff ZEDEX® ZX-410V7T A4T Polymer Alloy, Fiber Reinforced, Friction Modified

Category : Polymer , Thermoplastic

### Material Notes:

Main Characteristics: Fiber-reinforced; Friction-modified; Very high stiffness (higher than that of fiber-reinforced PEEK); Very low thermal expansion coefficient; Low friction; High wear resistance up to 200 °C Applications: Handling; Shipbuilding; Automitve Technology; Machine Tools; Drive Technology; Railway Technology Information provided by Zedex

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Wolf-Kunststoff-ZEDEX-ZX-410V7T-A4T-Polymer-Alloy-Fiber-Reinforced-Friction-Modified.php](http://www.lookpolymers.com/polymer_Wolf-Kunststoff-ZEDEX-ZX-410V7T-A4T-Polymer-Alloy-Fiber-Reinforced-Friction-Modified.php)

Physical Properties	Metric	English	Comments
Density	1.42 g/cc	0.0513 lb/in <sup>3</sup>	ISO 1183
Water Absorption	0.40 % @Temperature 23.0 °C	0.40 % @Temperature 73.4 °F	RMC 93%; DIN EN ISO 62
Moisture Absorption at Equilibrium	1.2 %	1.2 %	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	146 MPa	21200 psi	DIN 2039
Tensile Strength at Break	71.0 MPa	10300 psi	DIN EN ISO 527
Tensile Strength	71.0 MPa	10300 psi	DIN EN ISO 527
Tensile Stress	51.0 MPa @Strain 1.00 %, Time 3.60e+6 sec	7400 psi @Strain 1.00 %, Time 1000 hour	DIN 53444
Tensile Strength, Yield	42.4 MPa	6150 psi	Elastic Limit
Elongation at Break	4.5 %	4.5 %	Flexural; DIN EN ISO 178
	4.5 %	4.5 %	DIN EN ISO 527
Elongation at Yield	1.8 %	1.8 %	Elastic Yield Point
	4.5 %	4.5 %	Elongation at Maximum Force; DIN EN ISO 527
	4.8 %	4.8 %	Flexural; DIN EN ISO 178
Tensile Modulus	5.499 GPa	797.6 ksi	DIN EN ISO 527

Mechanical Properties	Metric	English	Comments
Flexural Strength	127 MPa	18400 psi	Stress at 3.5% Outer Fiber Strain, DIN EN ISO 178
	136.4 MPa	19780 psi	DIN EN ISO 178
	138 MPa	20000 psi	DIN EN ISO 178
Flexural Modulus	5.545 GPa	804.2 ksi	DIN EN ISO 178
Compressive Yield Strength	132 MPa	19100 psi	DIN EN ISO 604
Compressive Strength	100 MPa	14500 psi	Elastic Limit
	133 MPa	19300 psi	break; DIN EN ISO 604
	135 MPa	19600 psi	DIN EN ISO 604
	70.0 MPa	10200 psi	
	@Time 3.60e+7 sec	@Time 10000 hour	
	96.0 MPa	13900 psi	
	@Time 360000 sec	@Time 100 hour	
	108 MPa	15700 psi	
	@Time 36.0 sec	@Time 0.0100 hour	
	129 MPa	18700 psi	DIN EN ISO 604
	@Strain 3.50 %	@Strain 3.50 %	
Compressive Modulus	6.30 GPa	914 ksi	DIN EN ISO 604
Fatigue Strength	59.0 MPa	8560 psi	1 Hz
	@# of Cycles 1.00e+6	@# of Cycles 1.00e+6	
K Factor (ISO)	0.20 $\mu\text{m}/\text{km}$	0.20 $\mu\text{m}/\text{km}$	
	@Temperature 20.0 °C	@Temperature 68.0 °F	
	0.90 $\mu\text{m}/\text{km}$	0.90 $\mu\text{m}/\text{km}$	
	@Temperature 100 °C	@Temperature 212 °F	
	1.0 $\mu\text{m}/\text{km}$	1.0 $\mu\text{m}/\text{km}$	
	@Temperature 200 °C	@Temperature 392 °F	
Charpy Impact Unnotched	3.00 J/cm <sup>2</sup>	14.3 ft-lb/in <sup>2</sup>	EN ISO 179/1eU
Charpy Impact, Notched	1.12 J/cm <sup>2</sup>	5.33 ft-lb/in <sup>2</sup>	EN ISO 179/1eA
Coefficient of Friction, Dynamic	0.16	0.16	Dry Operation
	@Temperature 20.0 °C	@Temperature 68.0 °F	

Mechanical Properties	Metric	English	Comments
	@Temperature 100 °C	@Temperature 212 °F	
Coefficient of Friction, Static	0.23	0.23	Dry Operation
	@Temperature 20.0 °C	@Temperature 68.0 °F	
Tensile Creep Modulus, 1000 hours	5260 MPa	763000 psi	At 1% Deformation; DIN 53444
Limiting Pressure Velocity	0.300 MPa-m/sec	8570 psi-ft/min	v = 1m/min
	0.500 MPa-m/sec	14300 psi-ft/min	v = 100m/min
	0.600 MPa-m/sec	17100 psi-ft/min	v = 10m/min
	1.667 MPa-m/sec	47580 psi-ft/min	v = 200m/min
Compression Set	2.2 %	2.2 %	Elastic Compression Limit
	5.2 %	5.2 %	Nominal Compressive Yield Strain; DIN EN ISO 604
	5.2 %	5.2 %	Nominal Compressive Strain at Compressive Strength; DIN EN ISO 604
	39 %	39 %	Nominal Compressive Strain at Break; DIN EN ISO 604

Thermal Properties	Metric	English	Comments
CTE, linear	23.0 µm/m-°C	12.8 µin/in-°F	ISO E 830
	@Temperature <=100 °C	@Temperature <=212 °F	
	25.0 µm/m-°C	13.9 µin/in-°F	ISO E 831
	@Temperature <=150 °C	@Temperature <=302 °F	
Specific Heat Capacity	0.870 J/g-°C	0.208 BTU/lb-°F	DSC
Melting Point	315 °C	599 °F	DSC
Maximum Service Temperature, Air	150 °C	302 °F	Pressed Bushings
	190 °C	374 °F	Continuous
	200 °C	392 °F	Short Term (3h)
Deflection Temperature at 1.8 MPa (264 psi)	206 °C	403 °F	DIN EN ISO 75
Glass Transition Temp, Tg	211 °C	412 °F	DSC
Flammability, UL94	V-0	V-0	

Electrical Properties	Metric	English	Comments
Volume Resistivity	3.60e+6 ohm-cm	3.60e+6 ohm-cm	IEC 93
Surface Resistance	3.00e+6 ohm	3.00e+6 ohm	IEC 93
Dielectric Constant	3.3	3.3	IEC 250
	@Frequency 110 Hz	@Frequency 110 Hz	
Dielectric Strength	0.100 kV/mm	2.54 kV/in	IEC 243
Dissipation Factor	0.00070	0.00070	IEC 112
	0.083	0.083	
	@Frequency 1.00 Hz	@Frequency 1.00 Hz	

Descriptive Properties	Value	Comments
Alignment Adjustment	2	Nominal Scale: 1, low; 10, high
Chemical Sterilization	4	Nominal Scale: 1, low; 10, high
Color	Black	
Creep Resistance	7	Nominal Scale: 1, low; 10, high
Dimensional Stability with Thermal Expansion	9	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	7	Nominal Scale: 1, low; 10, high
Plastic Granules	Applicable	
Resistance Against dust, Dirt, Abrasive Substances	7	Nominal Scale: 1, low; 10, high
Resistance Against Hot Water	130	
Resistance to Chemicals	5	Nominal Scale: 1, low; 10, high
Resistant Against Disinfectant	Applicable	
Rods up to Øe (de)	Applicable	
Sheets up to Maximum Thickness	Applicable	
Sliding Velocity	100	

Descriptive Properties <small>Suitable for Outdoor Use</small>	Value	Comments <small>Nominal Scale: 1, low; 10, high</small>
Tubes (hollow rods) up to Øe (de)	Applicable	
UV Rays Resistance	9	Nominal Scale: 1, low; 10, high
UV-Sterilization	10	Nominal Scale: 1, low; 10, high

## Contact Songhan Plastic Technology Co.,Ltd.

Website : [www.lookpolymers.com](http://www.lookpolymers.com)

Email : [sales@lookpolymers.com](mailto:sales@lookpolymers.com)

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China