

Wolf Kunststoff ZEDEX® ZX-530CD3 031 Polymer Alloy, Fiber Reinforced and PTFE Modified

Category : Polymer , Thermoplastic

Material Notes:

Main Characteristics: Dimensionally stable and rigid; Stress resistant; Extremely low wear to 100 ° C Applications: Chemical Engineering; Laboratory Technology; Automitve Technology; Machine Tools Information provided by Zedex

Order this product through the following link:

http://www.lookpolymers.com/polymer_Wolf-Kunststoff-ZEDEX-ZX-530CD3-031-Polymer-Alloy-Fiber-Reinforced-and-PTFE-Modified.php

Physical Properties	Metric	English	Comments
Density	1.67 g/cc	0.0603 lb/in ³	ISO 1183
Water Absorption	0.010 % @Temperature 23.0 °C	0.010 % @Temperature 73.4 °F	RMC 93%; DIN EN ISO 62
Moisture Absorption at Equilibrium	0.050 %	0.050 %	DIN EN ISO 62

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	>= 100	>= 100	DIN 53505
Hardness, Shore D	79	79	DIN 53505
Ball Indentation Hardness	116 MPa	16800 psi	DIN 2039
Tensile Strength at Break	32.0 MPa	4640 psi	DIN EN ISO 527
Tensile Strength	32.0 MPa	4640 psi	DIN EN ISO 527
Tensile Stress	16.0 MPa @Strain 1.00 %, Time 3.60e+6 sec	2320 psi @Strain 1.00 %, Time 1000 hour	DIN 53444
Tensile Strength, Yield	31.8 MPa	4610 psi	Elastic Limit
Elongation at Break	2.2 %	2.2 %	Flexural; DIN EN ISO 178
	2.2 %	2.2 %	DIN EN ISO 527
Elongation at Yield	0.70 %	0.70 %	Elastic Yield Point
	1.6 %	1.6 %	Flexural; DIN EN ISO 178
	2.2 %	2.2 %	Elongation at Maximum Force; DIN EN ISO 527
Tensile Modulus	3.34 GPa	484 ksi	DIN EN ISO 527
Flexural Strength	50.0 MPa	7250 psi	DIN EN ISO 178

Mechanical Properties	Metric 50.0 MPa	English 7250 psi	Comments DIN EN ISO 178
Flexural Modulus	4.03 GPa	585 ksi	DIN EN ISO 178
Compressive Strength	56.0 MPa	8120 psi	Elastic Limit
	77.0 MPa	11200 psi	break; DIN EN ISO 604
	77.0 MPa	11200 psi	DIN EN ISO 604
	22.0 MPa	3190 psi	
	@Time 3.60e+7 sec	@Time 10000 hour	
	59.0 MPa	8560 psi	
	@Time 36.0 sec	@Time 0.0100 hour	
	108 MPa	15700 psi	
	@Time 360000 sec	@Time 100 hour	
	52.0 MPa	7540 psi	DIN EN ISO 604
	@Strain 3.50 %	@Strain 3.50 %	
Compressive Modulus	2.60 GPa	377 ksi	DIN EN ISO 604
Fatigue Strength	19.0 MPa	2760 psi	1 Hz
	@# of Cycles 1.00e+6	@# of Cycles 1.00e+6	
K Factor (ISO)	0.20 µm/km	0.20 µm/km	
	@Temperature 100 °C	@Temperature 212 °F	
	0.30 µm/km	0.30 µm/km	
	@Temperature 20.0 °C	@Temperature 68.0 °F	
	1.5 µm/km	1.5 µm/km	
	@Temperature 200 °C	@Temperature 392 °F	
	2.1 µm/km	2.1 µm/km	
	@Temperature 240 °C	@Temperature 464 °F	
Charpy Impact Unnotched	0.890 J/cm ²	4.24 ft-lb/in ²	EN ISO 179/1eU
Charpy Impact, Notched	0.730 J/cm ²	3.47 ft-lb/in ²	EN ISO 179/1eA
Coefficient of Friction, Dynamic	0.16	0.16	Dry Operation
	@Temperature 20.0 °C	@Temperature 68.0 °F	
	0.17	0.17	Dry Operation

Mechanical Properties	@Temperature 100 °C Metric	@Temperature 212 °F English	Comments
Coefficient of Friction, Static	0.22	0.22	Dry Operation
	@Temperature 20.0 °C	@Temperature 68.0 °F	
Tensile Creep Modulus, 1000 hours	1760 MPa	255000 psi	At 1% Deformation; DIN 53444
Limiting Pressure Velocity	0.26667 MPa-m/sec	7613.4 psi-ft/min	v = 200m/min
	0.46666 MPa-m/sec	13323 psi-ft/min	v = 100m/min
	0.541 MPa-m/sec	15400 psi-ft/min	v = 1m/min
	1.21 MPa-m/sec	34500 psi-ft/min	v = 10m/min
Compression Set	3.8 %	3.8 %	Elastic Compression Limit
	11 %	11 %	Nominal Compressive Strain at Compressive Strength; DIN EN ISO 604
	30 %	30 %	Nominal Compressive Strain at Break; DIN EN ISO 604

Thermal Properties	Metric	English	Comments
CTE, linear	38.0 $\mu\text{m}/\text{m}\cdot\text{°C}$	21.1 $\mu\text{in}/\text{in}\cdot\text{°F}$	ISO E 830
	@Temperature ≤ 100 °C	@Temperature ≤ 212 °F	
	46.0 $\mu\text{m}/\text{m}\cdot\text{°C}$	25.6 $\mu\text{in}/\text{in}\cdot\text{°F}$	ISO E 831
	@Temperature ≤ 150 °C	@Temperature ≤ 302 °F	
Specific Heat Capacity	1.03 J/g-°C	0.246 BTU/lb-°F	DSC
Melting Point	320 °C	608 °F	DSC
Maximum Service Temperature, Air	95.0 °C	203 °F	Pressed Bushings
	240 °C	464 °F	Continuous
	260 °C	500 °F	Short Term (3h)
Deflection Temperature at 1.8 MPa (264 psi)	225 °C	437 °F	DIN EN ISO 75
Glass Transition Temp, Tg	100 °C	212 °F	DSC
Flammability, UL94	V-0	V-0	

Electrical Properties	Metric	English	Comments
Volume Resistivity	58000 ohm-cm	58000 ohm-cm	IEC 93

Electrical Properties	Metric ρ_{hm}	English ρ_{hm}	Comments
Dielectric Constant	4.4 @Frequency 110 Hz	4.4 @Frequency 110 Hz	IEC 250
Dielectric Strength	0.100 kV/mm	2.54 kV/in	IEC 243
Dissipation Factor	0.025	0.025	IEC 112
	0.074 @Frequency 1.00 Hz	0.074 @Frequency 1.00 Hz	

Descriptive Properties	Value	Comments
Alignment Adjustment	2	Nominal Scale: 1, low; 10, high
Chemical Sterilization	10	Nominal Scale: 1, low; 10, high
Color	Anthracite	
Creep Resistance	6	Nominal Scale: 1, low; 10, high
Dimensional Stability with Thermal Expansion	7	Nominal Scale: 1, low; 10, high
Free from Silicon	Applicable	
Gamma-rays Radiation Sterilization	4	Nominal Scale: 1, low; 10, high
Injection Molded Parts	Applicable	
Machined Parts	Applicable	
Moist Heat Sterilization	8	Nominal Scale: 1, low; 10, high
Plastic Granules	Applicable	
Resistance Against dust, Dirt, Abrasive Substances	4	Nominal Scale: 1, low; 10, high
Resistance Against Hot Water	140	
Resistance to Chemicals	8	Nominal Scale: 1, low; 10, high
Resistant Against Disinfectant	Applicable	
Rods up to \varnothing_e (de)	Applicable	
Sheets up to Maximum Thickness	Applicable	
Sliding Velocity	300	
Suitable for Outdoor Use	7	Nominal Scale: 1, low; 10, high
Suitable for Use in Water	Applicable	

Descriptive Properties Suitable for Vacuum	Value Applicable	Comments
Tubes (hollow rods) up to Øe (de)	Applicable	
UV Rays Resistance	8	Nominal Scale: 1, low; 10, high
UV-Sterilization	7	Nominal Scale: 1, low; 10, high

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