

## Zeus FEP Tubing

Category : Polymer , Thermoplastic , Fluoropolymer , FEP , Fluorinated Ethylene Propylene (FEP), Molded/Extruded

**Material Notes:**

FEP, fluorinated ethylene propylene, is a melt processable fluoropolymer that allows for long, continuous lengths and has several distinct advantages over PTFE. Applications where FEP tubing is usually chosen require more optical clarity and flexibility. In heat shrinkable form, FEP has a lower recovery temperature than PTFE. This fluoropolymer makes heat shrink and convoluted products that meet 23053/11 and 81914 Mil Spec certifications, respectively. The material has low gas and permeability properties; possesses an excellent UV transmission rating; Biocompatible –USP Class VI approved; and is Gamma sterilizable.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Zeus-FEP-Tubing.php](http://www.lookpolymers.com/polymer_Zeus-FEP-Tubing.php)

Physical Properties	Metric	English	Comments
Density	2.12 - 2.17 g/cc	0.0766 - 0.0784 lb/in <sup>3</sup>	ASTM D792
Water Absorption	0.0040 %	0.0040 %	ASTM D257
Crystallinity	70 %	70 %	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	55 - 65	55 - 65	ASTM D2240
Tensile Strength, Ultimate	18.0 - 34.0 MPa	2610 - 4930 psi	ASTM D638
Elongation at Break	245 - 400 %	245 - 400 %	ASTM D638
Modulus of Elasticity	0.440 - 0.640 GPa	63.8 - 92.8 ksi	ASTM D638
Flexural Modulus	0.580 - 0.620 GPa	84.1 - 89.9 ksi	ASTM D790
Coefficient of Friction	0.040 - 0.20	0.040 - 0.20	

Thermal Properties	Metric	English	Comments
CTE, linear	100 - 135 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	55.6 - 75.0 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	ASTM D696
	@Temperature 20.0 $^\circ\text{C}$	@Temperature 68.0 $^\circ\text{F}$	
Thermal Conductivity	0.190 - 0.250 W/m-K	1.32 - 1.74 BTU-in/hr-ft <sup>2</sup> - $^\circ\text{F}$	ASTM C177
Melting Point	265 - 275 $^\circ\text{C}$	509 - 527 $^\circ\text{F}$	
Maximum Service Temperature, Air	200 - 205 $^\circ\text{C}$	392 - 401 $^\circ\text{F}$	
Minimum Service Temperature, Air	-240 - -200 $^\circ\text{C}$	-400 - -328 $^\circ\text{F}$	
Glass Transition Temp, Tg	80.0 $^\circ\text{C}$	176 $^\circ\text{F}$	

Thermal Properties	Temperature	Metric	30 °C	English	15 °F	Comments	1
Oxygen Index		>= 95 %		>= 95 %		ASTM D2863	

Optical Properties	Metric	English	Comments
Refractive Index	1.33 - 1.35	1.33 - 1.35	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+17 - 1.00e+18 ohm-cm	1.00e+17 - 1.00e+18 ohm-cm	ASTM D257
Dielectric Constant	2.0 - 2.1 @Frequency 1.00e+6 Hz	2.0 - 2.1 @Frequency 1.00e+6 Hz	ASTM D150
Dielectric Strength	19.7 - 78.7 kV/mm	500 - 2000 kV/in	ASTM D149

Descriptive Properties	Value	Comments
Radiation Resistance (MRad)	10	

## Contact Songhan Plastic Technology Co.,Ltd.

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