

XTRA(THERM™) HS-814



Medical-Grade USP Class VI heat-shrink tubing that sets the standard for high-performance, safety and reliability

Xtra-Therm HS-814 is a high heat resistant, thin wall fluoropolymer tubing with exceptional mechanical strength that is ideal for electrical insulation, stiffening, strain relief, and as a manufacturing aid in demanding environments.



2:1 Shrink Ratio

Radiation Cross-Linked, Polyvinylidene Fluoride

100% factory double tested for superior insulation integrity, reliability and safety

High heat resistant insulating tubing

- Operating Temperature Range: -55°C to 175°C (-67°F to 347°F)

Semi-rigid, exceptionally tough, with a very thin .005" – .006" (0.127 mm - 0.152 mm) expanded wall

- Excellent mechanical strength
- Outstanding abrasion, cut-through and high impact resistance
- High dielectric strength

Excellent resistance to a wide variety of chemicals and fluids

Sterilization Options – Can be repeatedly sterilized by:

- E-Beam and Gamma Radiation
- Autoclave
- ETO

Alcohol wiped, packaged on plastic spools, in 4-foot lengths or as cut pieces, and double plastic bagged in a clean room environment

Complete lot traceability

Meets the most stringent bio-compatible specifications:

- USP Class VI Compliant
- ISO-10993-5 Certified
- USFDA Compliant
- RoHS Compliant

USP Class VI and ISO 10993-5 Cytotoxicity documentation provided as post process certification when requested

Non shrink version, Xtra-Therm HS-814 (Non Shrink) tubing / sleeving, is also available

Insultab is ISO-9001:2008 Certified

Insultab's tubing products are



THE XTRA-THERM HS-814 DIFFERENCE

- High heat resistant fluoropolymer
- Semi-rigid, thin wall tubing with exceptional mechanical strength
- Lower cost substitute for PTFE in many applications
- Lower shrink temperature than PTFE

Shrink Ratio: 2:1

NOTE: HS-814 can be customized to your specifications for expanded and recovered diameters, wall thicknesses and shrink ratios

Minimum Recommended Shrink Temperature: 175°C (347°F)

Operating Temperature Range: -55°C to 175°C (-67°F to 347°F)

Longitudinal Shrinkage: +/-10%

Physical / Electrical Properties:

Specific Gravity: 1.80

Durometer: Shore D 63

Tensile Strength: 5740 psi

Dielectric Strength: 1,300 vpm

Ultimate Elongation: 440 psi

Chemical Resistance:

Excellent resistance to a wide variety of chemicals and fluids including isopropyl alcohol and saline solution

AUTOClave CYCLE TEST:		
20 cycles @ 134°C 30 psig for 15 min. with fast dry cycle, followed by test for:		
Property	Test Method	Typical Value
Volume Resistivity @ 500 volts	ASTM D 257	No change from original
Dielectric Strength in air @ 500 kv/min rise	ASTM D 149	No change from original
Dielectric Constant @ 1 MHz	ASTM D 150	No change from original
Dissipation Factor @ 1 MHz	ASTM D 150	No change from original

Notice to User: It is imperative that manufacturers and end-users understand that the electro-surgical instruments should be placed separately, without overlay, on autoclave trays. Potential damage caused by overlay in the autoclave will significantly reduce this and any other dielectric insulator's ability to pass the 20 cycles of autoclave required by the AAMI.

All statements and recommendations are based on technical data that INSULTAB believes to be true and reliable. It is the responsibility of the user to determine functionality and suitability. If you have any questions on the use or handling of this product, please contact us at 800-468-4822.

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Standard Dimensions — HS-814 can be customized

Size	Expanded I.D. Minimum		Recovered I.D. Maximum		As Supplied Wall Nominal		Recovered Wall Nominal		Standard 4-Ft. Lengths (per box)
	in.	mm	in.	mm	in.	mm	in.	mm	Box Contents
3/32	.093	2.36	.046	1.17	.005	0.13	.010	.25	1,000'
1/8	.125	3.18	.062	1.58	.005	0.13	.010	.25	1,000'
3/16	.187	4.75	.093	2.36	.005	0.13	.010	.25	1,000'
1/4	.250	6.35	.125	3.18	.006	0.16	.013	.33	500'
3/8	.375	9.53	.187	4.75	.006	0.16	.013	.33	200'
1/2	.500	12.70	.250	6.35	.006	0.16	.013	.33	200'

Standard Colors

Black



White



We will manufacture to your precise specifications:

- Custom expanded and recovered diameters
- Custom wall thicknesses
- Custom shrink ratios
- Custom cut lengths to extremely tight tolerances
- Custom color matching
- Custom printing with USP Class VI inks

All information presented is believed to be reliable and is offered only as a guide to product selection. As each



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