



XTRA SHIELD™ HS-714

For insulating electro-surgical instruments and for biocompatible jacketing for temporary implantation devices
Medical-Grade USP Class VI heat shrink tubing that sets the standard for high-performance, safety and reliability, meeting the most stringent biocompatible criteria



FEATURES

Shrink Ratio: 2:1

Radiation Cross-Linked Acrylated Olefin

- Proprietary formulation — virgin polymer with no additives
- Non toxic

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

Unique heat sealable and adhesion properties without adhesives

- Tubing tightly fuses to the substrate and prevents slippage
- Moisture is blocked from penetrating between the tubing and the substrate
- Adheres to metals, glass and selected plastics

Superior insulation integrity and reliability protects against insulation failure

- High Dielectric Strength: 1800–2000 vpm

Exceptionally strong and durable

- Superior cut-through, puncture and abrasion resistance
- Protects against damage from sharp instruments

Excellent resistance to a wide range of chemicals

Numerous sterilization options — can be repeatedly sterilized by:

- E-Beam and Gamma Radiation
- Autoclave
- ETO
- Steris Process-Paracetic Acid
- Hydrogen Peroxide Gas
- Gluteraldehyde

Alcohol wiped and packaged as cut pieces, in coils or on plastic spools, and double plastic bagged in a clean room environment

Complete lot traceability

SPECIFICATIONS

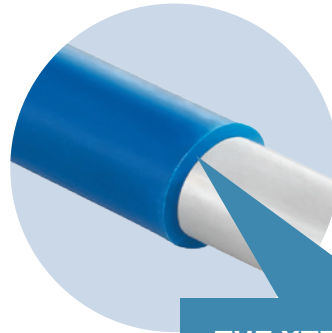
Meets the most stringent biocompatible specifications:

- 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

Insultab is ISO-9001:2008 Certified

Insultab's tubing products are made in the USA



THE XTRA-SHIELD HS-714 DIFFERENCE

- Proprietary Acrylated Olefin
- High dielectric strength
- Superior cut-through, puncture and abrasion resistance
- Unique heat sealable and adhesion properties without adhesives
- Numerous sterilization options

MEDICAL-GRADE HEAT SHRINKABLE TUBING

TECHNICAL DATA

Shrink Ratio: 2:1

NOTE: HS-714 can be customized to your specifications for expanded and recovered diameters, wall thicknesses and shrink ratios

Minimum Recommended Shrink Temperature: 121°C (250°F)

Maximum Recommended Shrink Temperature: 149°C (300°F)

Operating Temperature Range: -55°C to 121°C (-67°F to 250°F)

Longitudinal Shrinkage: +5/-5%

Physical / Electrical Properties:

Specific Gravity: 0.934

Durometer: Shore D 53

Tensile Strength: 3200 / 3600 psi

Elongation: 500 / 600%

Secant Modulus: (2%) 1.2 X 10⁴ psi

Heat Shock: 168 hours @ 150° C No dripping or cracking

Volume Resistivity: @ 500 volts >10¹⁶

Dielectric Strength: 1,800 / 2,000 vpm

Dielectric Constant @ 1MHz: 2.0 / 2.2

Dissipation Factor @ 1MHz: 0.008

Chemical Resistance:

Resists a wide range of chemicals including: Hexachlorophene (pHisoHex), saline solution, povidone-iodine (Betadine), benzalkonium (Zephiran), alcohol

Resists moisture, UV light and fungus

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Autoclave Cycle Test:

20 cycles @ 121°C 15 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.

SIZES & COLORS

Standard Dimensions — HS-714 can be customized

SIZE	Expanded I.D. Minimum		Recovered I.D. Maximum		Recovered Wall Nominal		Standard Packaging (per Box) Product is Supplied in Coils or on Plastic Spools	
	in.	mm	in.	mm	in.	mm	FT. / COIL OR SPOOL	TOTAL FT. / BOX
3/32	.093	2.36	.046	1.17	.020	0.51	1,000'	2,000'
1/8	.125	3.18	.062	1.58	.020	0.51	1,000'	2,000'
3/16	.187	4.75	.093	2.36	.020	0.51	1,000'	2,000'
1/4	.250	6.35	.125	3.18	.025	0.64	500'	1,000'
3/8	.375	9.53	.187	4.75	.025	0.64	200'	600'
1/2	.500	12.70	.250	6.35	.025	0.64	200'	600'

Standard Colors: Black, White, Blue, Clear

Custom colors are also available

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