



## MEDICAL GRADE HEAT SHRINKABLE TUBING

### HS-714

#### FEATURES

- **XTRA** safe 100% factory double tested for insulation integrity, reliability and safety
- **XTRA** dielectric strength 1800 - 2000 vpm, protects against insulation failure
- **XTRA** strong cut-through protection prevents against damage from sharp instruments
- **XTRA** options - HS-714 can be customized to your specifications for expanded and recovered diameters, wall thicknesses and shrink ratios and colors
- 2:1 shrink ratio
- Meets the most stringent USP Class VI biocompatible requirements
- Highly lubricious
- Non-toxic
- Unique heat sealable property prevents insulation slippage and prevents moisture from entering into the substrate
- Resists a wide range of chemicals
- Tubing can be cut, printed and marked per USP Class VI in our factory
- Alcohol wiped, packaged in coils or on plastic spools and double bagged in a clean room environment

#### USES

- Superior, protective insulation for endoscopic, laparoscopic and cauterization probe instruments
- Biocompatible jacketing for temporary implantation devices
- Tube joining, transitioning and stiffening
- Identification of components
- Cushioning metal surfaces

#### SPECIFICATIONS

- USP XXII, NF XVII Class VI, as supplied with a post process certification

## SPECIFY HS-714 FOR **XTRA** STERILIZATION OPTIONS

- Electron Beam and Gamma Radiation
- Autoclave Sterilization
- ETO Sterilization
- Steris Process-Paracetic Acid
- Hydrogen Peroxide Gas
- Glutaraldehyde

## MEDICAL GRADE HEAT SHRINKABLE TUBING

### HS-714

#### TECHNICAL DATA

- Shrink Ratio: 2:1
- 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)
- Operating Temperature Range: -55°C to 121°C
- Longitudinal Shrinkage: +5/-5%
- Physical / Electrical Properties:
  - Density: 0.934
  - Tensile Strength: 3200 / 3600 psi
  - Elongation: 500 / 600%
  - Secant Modulus: (2%)  $1.2 \times 10^4$  psi
  - Heat Shock: 168 hours @ 150° C No dripping or cracking
  - Volume Resistivity: @ 500 volts  $>10^{16}$
  - Dielectric Strength: 1,800 / 2,000 vpm
  - Dielectric Constant @ 1Mhz: 2.0 / 2.2
  - Dissipation Factor @ 1Mhz: 0.008
  - Class VI (bio-compatibility): Pass
- Chemical Resistance:
  - Resists a wide range of chemicals including: Hexachlorophene (pHisoHex), saline solution, povidone-iodine (Betadine), benzalkonium (Zephiran), alcohol
  - Resists moisture, sunlight and fungus

#### SPECIFICATIONS

- USP XXII, NF XVII Class VI, as supplied with a post process certification

Autoclave Cycle Test:		
20 cycles @ 121°C 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.

Size	Expanded I.D. Minimum		Recovered I.D. Maximum		Recovered Wall Nominal		Standard Packaging (per box) Product on Coils or 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, Blue, White, Clear