

## Junkosha Peelable Heat Shrink Tubing

### NFP - Extra Large Offering

#### Large Size Peelable Heat Shrink Tubing

Removing traditional FEP-Heat Shrink Tubing (HST) smoothly has been a serious problem in catheter manufacturing for many years. To resolve the issue of 'skiving' it off, Junkosha designed a product called Peelable Heat Shrink Tubing (PHST). Offering all of the performance of standard heat shrink tubing, it includes one critical difference: it is easy to remove from the catheter. Junkosha Peelable Heat Shrink Tubing solution needs only a slit at one end to get it started, enabling it to be easily and consistently peeled along its entire length.



Junkosha's portfolio includes the widest range of both small and large size peelable heat shrink tubing solutions on the market today. The large size product range provides catheter manufacturers with the versatility they require to complete increasingly intricate procedures. Conventional skiving techniques do not work on larger reflowed catheters, frequently leading to bending or kinking of the catheter shaft, therefore rendering them useless. In addition, as a result of PHST's 'take-up', it allows the use of cost-effective, lower tolerance, baseline materials in the manufacturing process, facilitating the ability to reflow these easily into a single smooth and consistent construct.

#### Features

- **Material Melting Temperature:** 245°C to 275°C.
- **Peelable Design:** It features an easily peelable design, reducing the risk of damage to the catheter during removal.
- **Customizable Options:** In addition to the products listed in the catalog, we also offer custom size options, allowing you to choose the most suitable option according to your needs.
- **Elongation Properties:** The lengthwise elongation of the tube after shrinkage can be controlled within a specific range.
- **USP Class VI Certified Material:** The tube material is certified to meet the stringent requirements of USP (United States Pharmacopeia) Class VI, ensuring safety and quality.

#### Properties

Material	FEP based fluoropolymer
Color	Translucent
Expanded I.D. (Min.) [mm/inch]	7.62-12.00 / 0.3000-0.4724
Full Recovered I.D. (Max.) [mm/inch]	5.08-8.00 / 0.2000-0.3150
Full Recovered Wall Thickness [mm/inch]	0.33 (+/-0.05) / 0.0130 (+/-0.0020)
Shrink Ratio	1.5 : 1
Biocompatibility	USP Class VI

#### Extra Large PHST Applications

##### Heart Valve Disease - Catheters

- Transcatheter Aortic Valve Replacement (TAVR)
- Transcatheter Mitral (TMVR)
- Transcatheter Tricuspid (TTVR)
- Transcatheter Pulmonary (TPVR)

##### Peripheral Arterial Disease - Catheters

- Abdominal Aortic Aneurysm (AAA)
- Thoracic Aortic Aneurysm (TAA)

## Product Lineup

NFP

Extra Large      1.5:1 Shrink Ratio      Standard Length: 1500 mm      Color: Translucent      Recommended Temperature: 200°C

Parts No.	Metric			Imperial			French
	Expanded I.D. Min.	Full Recovered I.D. Max.	Full Recovered Wall Thickness	Expanded I.D. Min.	Full Recovered I.D. Max.	Full Recovered Wall Thickness	Suitable for
NFP064	7.62 mm	5.08 mm	0.33 +/- 0.05 mm	0.3000"	0.2000"	0.0130 +/- 0.0020"	16 - 22 Fr
NFP074	8.89 mm	5.93 mm	0.33 +/- 0.05 mm	0.3500"	0.2335"	0.0130 +/- 0.0020"	18 - 26 Fr
NFP085	10.16 mm	6.77 mm	0.33 +/- 0.05 mm	0.4000"	0.2665"	0.0130 +/- 0.0020"	21 - 30 Fr
NFP095	11.43 mm	7.62 mm	0.33 +/- 0.05 mm	0.4500"	0.3000"	0.0130 +/- 0.0020"	23 - 34 Fr

## Technical Data

### Specifications

Parts No.	NFP064	NFP074	NFP085	NFP095
Expanded I.D. (Min.) [mm/inch]	7.62/0.3000	8.89/0.3500	10.16/0.4000	11.43/0.4500
Full Recovered I.D. (Max.) [mm/inch]	5.08/0.2000	5.93/0.2335	6.77/0.2665	7.62/0.3000
Full Recovered Wall Thickness [mm/inch]	0.33±0.05/0.0130±0.0020	0.33±0.05/0.0130±0.0020	0.33±0.05/0.0130±0.0020	0.33±0.05/0.0130±0.0020
Shrink Ratio	1.5:1	1.5:1	1.5:1	1.5:1
Color	Translucent	Translucent	Translucent	Translucent
Material Melting Temperature [°C]	245~275	245~275	245~275	245~275
Peelable	Yes	Yes	Yes	Yes
Elongation [%]	10±5	10±5	10±5	10±5
Removable	Yes	Yes	Yes	Yes
Friction	Low	Low	Low	Low
Biocompatibility	USP Class VI	USP Class VI	USP Class VI	USP Class VI

\* Shrink Ratio = Expanded I.D. / Recovered I.D.

### Visual Appearance

Example with Various Catheter Materials Inserted into Peelable Tubing



\*Junkosha is manufactured and inspected in mm and values in inch are for reference only. Measurements of each dimension are performed using metric based measuring instruments.

\*The inch values are calculated from the actual measured values (metric values) using the following formula, with one digit below the displayed digit rounded to the nearest value (numbers 5 and above are rounded up, and numbers below 5 are rounded down). (Inch value) = (Metric value) ÷ 25.4

\*Peelable Heat Shrink Tubing meets the requirement of USP Plastic Class VI. Certificates available on request.

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