Junkosha Peelable Heat Shrink Tubing

Junkosha

Enabling Technology Innovators

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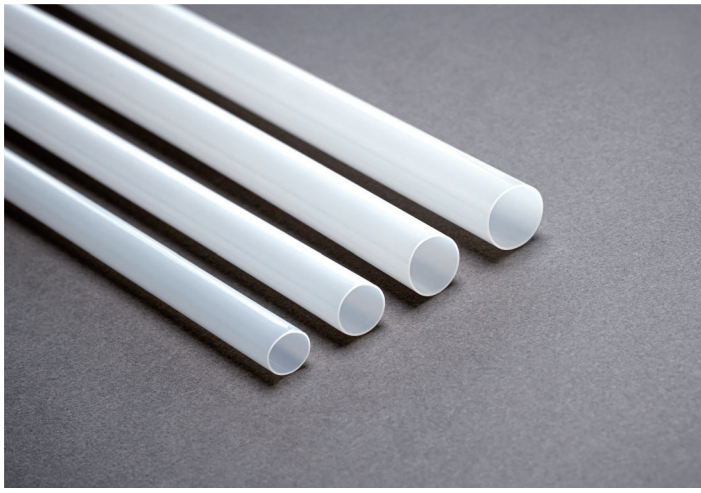
Product Introduction

Junkosha has focused on issues in the manufacturing process of catheters and guide wires. As the pioneer of sophisticated fluoropolymer application technologies across the medical device sector, we have developed the market leading Peelable Heat Shrink Tubing.
In the industry of catheters and guide wires, we understand that simple and reliable methods help extremely fine processes remain unproblematic.

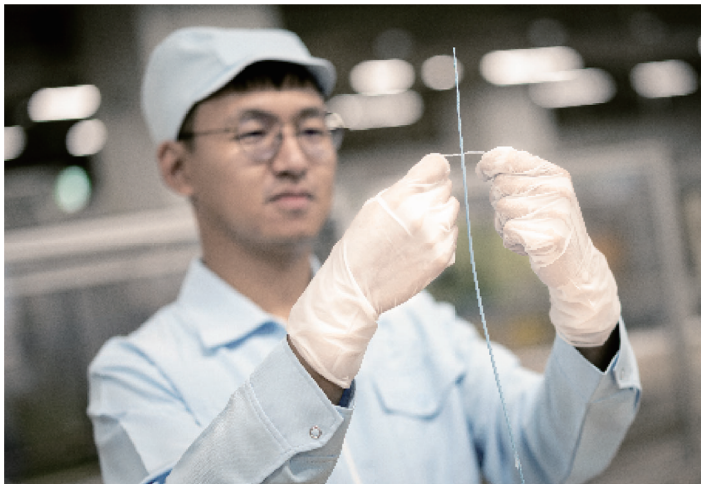


Introduction to Large Size Junkosha Peelable Heat Shrink Tubing

Junkosha has added new capability and now offer the largest size range of peelable heat shrink tubing on the market today. With similar benefits to the smaller sizes available, this product range has been designed to support the manufacture of catheters used to treat endovascular disease, abdominal aortic aneurisms and heart valves to name a few.

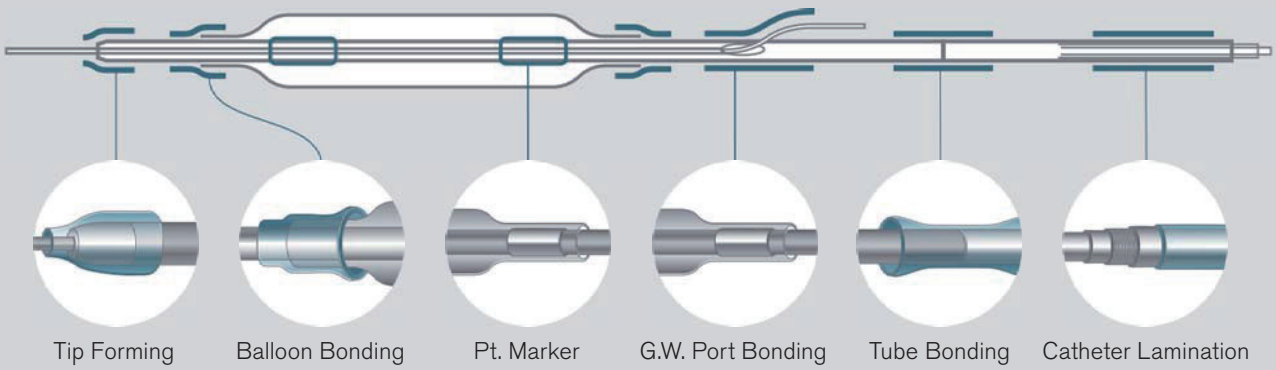
Junkosha Peelable Heat Shrink Tubing vs Other Traditional HST

Removing traditional FEP-Heat Shrink Tubing (HST) smoothly has been a serious problem in catheter manufacturing for many years. FEP-HST is used to weld, laminate, tip and other processes. The only way to remove it from the catheter is by “skiving” it off, which not only takes significant time, there is also a possibility that the catheter can become damaged in the process. Both costly and time consuming, the market needed to find a viable solution to this unmet need.



With the challenge set, Junkosha designed a product called peelable heat shrink tubing. Offering all of the performance of standard heat shrink tubing, it included one critical difference: it is very easy to remove from the catheter. Junkosha Peelable Heat Shrink Tubing solution needs only a single slit at one end to get it started, enabling it to be easily peeled along its entire length. This solution reduces Total Cost of Ownership (TCO) for catheter manufacturers, by helping them to produce the final product more rapidly with improved yields and lower inspection levels while being more ergonomically safe. Overall, Junkosha Peelable Heat Shrink Tubing is the industry’s first peelable FEP heat shrink tubing, and continues to be the industry benchmark of safety and performance.

Application



Product Lineup

Material: Fluoropolymer
Recommended Temperature: 200°C

NFPS Extra Large 1.6:1 Shrink Ratio Standard Length: 1000 mm Color: Opaque

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
NFPS062	7.62 mm	4.77 mm	0.46 +/- 0.07 mm	0.3000"	0.1878"	0.0181 +/- 0.0028"	17 - 20 Fr
NFPS072	8.89 mm	5.56 mm	0.51 +/- 0.07 mm	0.3500"	0.2189"	0.0201 +/- 0.0028"	20 - 23 Fr
NFPS083	10.16 mm	6.35 mm	0.51 +/- 0.07 mm	0.4000"	0.2500"	0.0201 +/- 0.0028"	23 - 27 Fr
NFPS093	11.43 mm	7.13 mm	0.51 +/- 0.07 mm	0.4500"	0.2807"	0.0201 +/- 0.0028"	27 - 30 Fr

NFPS Large 1.6~1.4:1 Shrink Ratio Standard Length: 1000 mm Color: Translucent

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
NFPS036	4.45 mm	2.79 mm	0.275 +/- 0.05 mm	0.1752"	0.1098"	0.0108 +/- 0.0020"	11 - 12 Fr
NFPS038	4.78 mm	2.92 mm	0.275 +/- 0.05 mm	0.1882"	0.1150"	0.0108 +/- 0.0020"	13 - 15 Fr
NFPS052	6.05 mm	4.32 mm	0.275 +/- 0.05 mm	0.2382"	0.1701"	0.0108 +/- 0.0020"	15 - 17 Fr

NFPS Standard 1.6:1 Shrink Ratio Standard Length: 1700 mm Color: Translucent

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
NFPS005	0.64 mm	0.40 mm	0.20 +/- 0.05 mm	0.0252"	0.0157"	0.0079 +/- 0.0020"	1.5 Fr
NFPS007	0.80 mm	0.50 mm	0.20 +/- 0.05 mm	0.0315"	0.0197"	0.0079 +/- 0.0020"	2.0 Fr
NFPS008	0.96 mm	0.60 mm	0.20 +/- 0.05 mm	0.0378"	0.0236"	0.0079 +/- 0.0020"	2.5 Fr
NFPS009	1.12 mm	0.70 mm	0.20 +/- 0.05 mm	0.0441"	0.0276"	0.0079 +/- 0.0020"	3.0 Fr
NFPS010	1.28 mm	0.80 mm	0.20 +/- 0.05 mm	0.0504"	0.0315"	0.0079 +/- 0.0020"	3.5 Fr
NFPS012	1.44 mm	0.90 mm	0.20 +/- 0.05 mm	0.0567"	0.0354"	0.0079 +/- 0.0020"	4.0 Fr
NFPS013	1.60 mm	1.00 mm	0.20 +/- 0.05 mm	0.0630"	0.0394"	0.0079 +/- 0.0020"	4.5 Fr
NFPS017	2.08 mm	1.30 mm	0.20 +/- 0.05 mm	0.0819"	0.0512"	0.0079 +/- 0.0020"	5.0 Fr
NFPS021	2.56 mm	1.60 mm	0.275 +/- 0.05 mm	0.1008"	0.0630"	0.0108 +/- 0.0020"	6 - 8 Fr
NFPS028	3.36 mm	2.10 mm	0.275 +/- 0.05 mm	0.1323"	0.0827"	0.0108 +/- 0.0020"	8 - 11 Fr

NFP Standard 1.4:1 Shrink Ratio Standard Length: 1500 mm Color: Translucent

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
NFP006	0.71 mm	0.50 mm	0.20 +/- 0.05 mm	0.0280"	0.0197"	0.0079 +/- 0.0020"	1.8 Fr
NFP007	0.86 mm	0.60 mm	0.20 +/- 0.05 mm	0.0339"	0.0236"	0.0079 +/- 0.0020"	2.2 Fr
NFP008	1.00 mm	0.70 mm	0.20 +/- 0.05 mm	0.0394"	0.0276"	0.0079 +/- 0.0020"	2.5 Fr
NFP010	1.14 mm	0.80 mm	0.20 +/- 0.05 mm	0.0449"	0.0315"	0.0079 +/- 0.0020"	3.0 Fr
NFP011	1.29 mm	0.90 mm	0.20 +/- 0.05 mm	0.0508"	0.0354"	0.0079 +/- 0.0020"	3.5 Fr
NFP013	1.57 mm	1.10 mm	0.20 +/- 0.05 mm	0.0618"	0.0433"	0.0079 +/- 0.0020"	4.0 Fr
NFP017	2.00 mm	1.40 mm	0.20 +/- 0.05 mm	0.0787"	0.0551"	0.0079 +/- 0.0020"	5.0 Fr
NFP021	2.30 mm	1.70 mm	0.25 +/- 0.05 mm	0.0906"	0.0669"	0.0098 +/- 0.0020"	6.0 Fr
NFP026	2.84 mm	2.10 mm	0.25 +/- 0.05 mm	0.1118"	0.0827"	0.0098 +/- 0.0020"	7 - 9 Fr
NFP030	3.38 mm	2.50 mm	0.25 +/- 0.05 mm	0.1331"	0.0984"	0.0098 +/- 0.0020"	8 - 11 Fr

NFPM Ultra Small 1.6:1 Shrink Ratio Standard Length: 1000 mm Color: Translucent

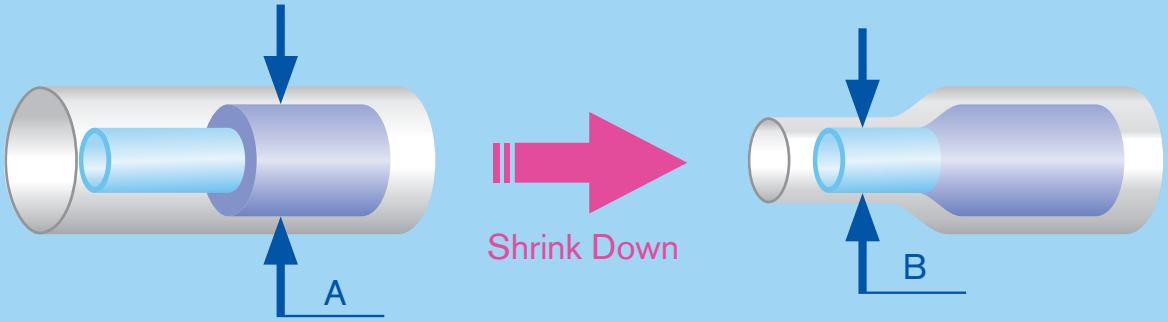
Parts No.	Metric			Imperial			French
	Expanded I.D. Min.	Full Recovered I.D. Max	Full Recovered Wall Thickness	**Expanded I.D.** Min.	Full Recovered I.D. Max	Full Recovered Wall Thickness	Suitable for
NFPM0030	0.38 mm	0.23 mm	0.20 +/- 0.05 mm	0.0150"	0.0091"	0.0079 +/- 0.0020"	1.0 Fr
NFPM0037	0.46 mm	0.28 mm	0.20 +/- 0.05 mm	0.0181"	0.0110"	0.0079 +/- 0.0020"	1.2 Fr
NFPM0042	0.51 mm	0.33 mm	0.20 +/- 0.05 mm	0.0201"	0.0130"	0.0079 +/- 0.0020"	1.4 Fr

*Junkosha is manufactured and inspected in mm and values in inch are for reference only.

*Raw materials meet USP Class VI, certificates available on request

How to Target Dimensions

1 Review your materials and target dimension measurements



Expanded I.D. > A and Recovered I.D. < B

Expanded I.D. is larger than maximum value of your material O.D.

Recovered I.D. is 0.1mm less than minimum target value of your product O.D.

2 Select the part number of the closest target

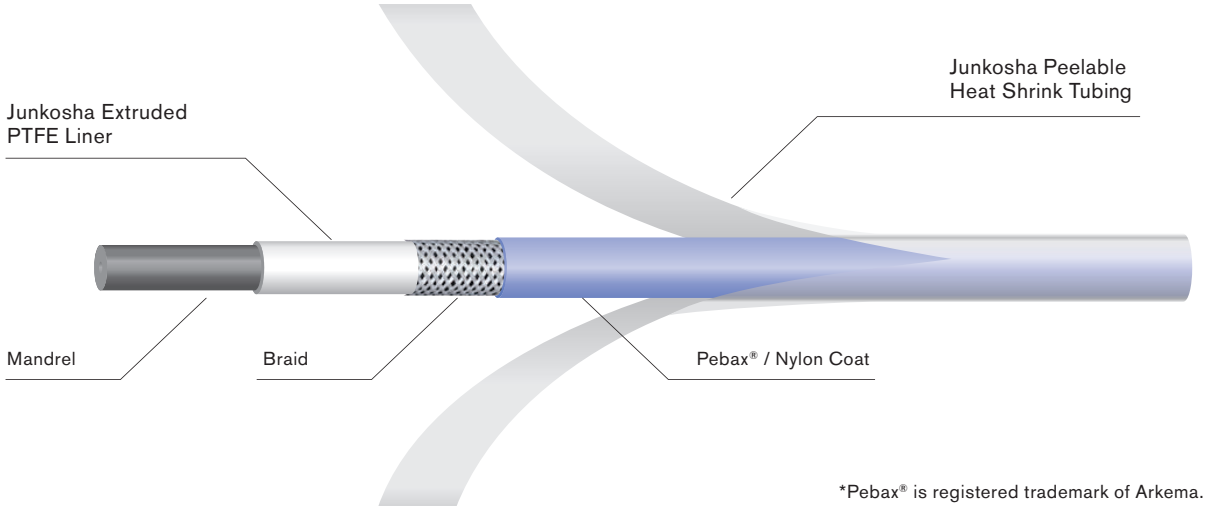
3 Request free samples through the website/ Junkosha Sales Associate

4 Receive samples and test them in your lab

Junkosha can eliminate your processing problems.

If you encounter any issues, kindly inform us. Our team of experts are well-equipped to swiftly provide tailored samples or useful technical information to resolve your specific problems.

General Catheter Layers



*Pebax® is registered trademark of Arkema.

Are you experiencing any of the following problems with heat shrink tubing?

- Can you accurately control the blade with your hand while cutting HST to remove it?
- Are you able to cut any part of the wall thickness of HST without damaging the product?
- Can you consistently repeat this process?
- Is your removing tool sensitive to inconsistency of inner material dimensions?

Junkosha's innovative Peelable Heat Shrink Tubing is an ideal solution for medical device manufacturers looking to improve the safety, speed and reliability of their processes.

Specification and Application

Application	GuideWire/Coils						Micro Catheter					Balloon Catheter									EP/Ablation Catheter									Guiding/Sheath						AAA/TAA/TAVI	
Catheter O.D inch	0.008	0.012	0.016	0.020	0.024	0.028	0.031	0.035	0.039	0.043	0.047	0.051	0.055	0.059	0.063	0.067	0.071	0.075	0.079	0.083	0.087	0.091	0.094	0.098	0.102	0.106	0.110	0.114	0.118	0.122	0.126	0.130	0.134	0.138	0.142	0.157 ~ 0.315	0.315 ~ 0.450
mm	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	4.0 ~ 8.0	8.0 ~ 11.43
NFPM		1.6 : 1																																			
NFPS												1.6 : 1																								1.4 : 1	1.6 : 1
NFP												1.4 : 1																									

NFPM

Ultra Small and Translucent

- Best for coating processes of Guide Wire/Coils
- Strong compression force
- Peelable Heat Shrink Tubing eliminates the need for skiving, simplifying processes and increasing yields

NFPS & NFP

Standard, Large, Extra large and Translucent

- Best for the replacement of current FEP-HST, polyolefin-HST and silicon-HST

Options

Junkosha offers custom translucent product of Max. 1.8:1 shrink ratio.

Inspection Sampling Plan

Cut to length & slit available for small size or short length applications

For sample requests, please contact your Junkosha Sales Associate

Patent Information for Junkosha Peelable Heat Shrink Tubing

The family of Junkosha Peelable Heat Shrink Tubing products is protected by patents or patent applications listed below.
The list is not all inclusive and Junkosha peelable heat shrink is covered by a global intellectual property network.

Jurisdiction	Patent Number / Patent Application Number				
China	ZL201280048315.2	ZL201510018848.1	ZL201610065436.8	CN202080026174	
Europe	EP2749802	EP3050696	EP3135313	EP20748499	
Japan	JP5518268	JP5839310	JP6990501	JP2020013370	
United States	US9446171	US9623154	US9464149	US9957384	US202017427189

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