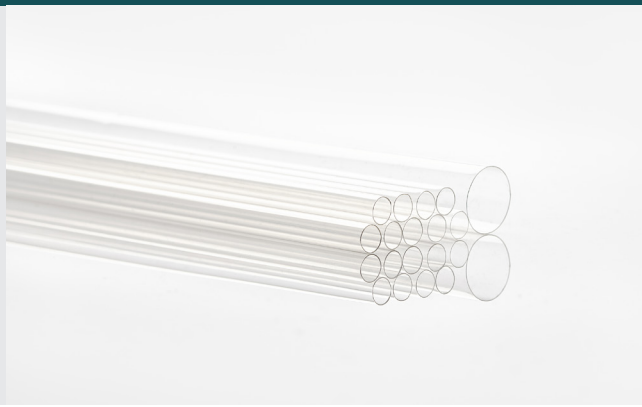
Optinova FEP Heat Shrink Tubing

Solutions for Medical Applications.

From the popular powerhouse 1.3:1 & 1.6:1 solutions to our unique QuickShrink™ low-temp solution, Optinova's FEP Heat Shrink is ideal for lamination and bonding.

Optinova's FEP Heat Shrink is extremely customizable. Optinova provides an off-the-shelf FEP HS toolbox for fast protoyping and offers custom shrink ratios upon request.



Key advantages

- **Tight tolerances:** Customizable shrink ratios ranging from 1.3:1 to 1.6:1, ensures tight, uniform jacketing during reflow, without compromising the underlying structure
- **Stable Performance:** Consistent batch-to-batch reliability, lowers scrap
- **Minimal Length Change:** Post-shrink length change is minimal with a maximum of 10% (optional 4%), outperforming the industry standard of 10-15%, which improves yield and lowers scrap
- **Superior cut to length:** Consistent clean, straight cuts with no defects
- **Toolbox Inventory:** Includes 1.6:1 FEP HS & QS ensuring FEP HS availability for quick-turn R&D prototyping demands
- **Scalability**: Enables rapid growth in production

Further advantages of QuickShrink™

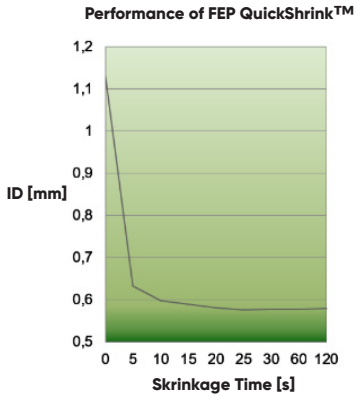
- **Fast shrinking process:** Fast Shrinkage within 30 seconds which results in shorter production cycle and reduced costs
- **Low Shrink Temperature:** FEP QuickShrink™ has a low and adjustable shrink temperature between (80°C - 210°C / 176°F - 410°F) compared with conventional heat shrink (215°C / 420°F). Safer for your device.
- **Versatile Properties:** High lubricity, transparency, chemical resistance and anti-stick surface make QuickShrink™ ideal for tube bonding, reflow processing, and forming.

Applications

- Catheter lamination
- Tip forming
- Balloon bonding
- Tube bonding
- Marking

Technical specifications

FEP HS 1.3:1 (Thailand, Valley Forge) FEP HS 1:6:1 (Finland, Thailand, Valley Forge)
QuickShrink FEP HS (Finland, Valley Forge)
Dimensional range: Exp. ID 0.80- 13.00 mm (0.033”- 0.512”),
Recovered Wall: 0.15 - 0.36 mm (.006" - .014") +/- 0.002"
Length: 25.4 mm- 1803 mm (1”- 71”)



Medical-grade certifications

ISO 9001 certified · ISO 13485 certified · ISO 14001 certified · Clean Room Class 7 & 8

Optinova
WHEN QUALITY MATTERS

We empower customers through highly reliable tubing solutions.

Properties

General	Unit	Heat Shrink 1.6:1	Heat Shrink 1.3:1	QuickShrink
Expanded ID	mm (inches)	0.8-13 (0.032-0.512)	0.7-13 (0.028-0.512)	0.8-12.7 (0.032-0.512)
Recovered Wall	mm (inches)	0.15-0.30 (0.006-0.012)	0.15-0.30 (0.006-0.012)	0.15-0.30 (0.006-0.012)
Specific gravity		2.15	2.15	2.15
Transparency		Very good	Very good	Very good
Sterilization		EtO, Steam	EtO, Steam	Eto, Steam
Environmental				
Water absorption	%	<0.01	<0.01	<0.01
Oxygen index	%	>95	>95	>95
Flammability		V-0	V-0	V-0
Weather resistance		Excellent	Excellent	Excellent
Chemical resistance		Excellent	Excellent	Excellent
Thermal				
Melting temperature	°C (°F)	260-265 (500-509)	260-265 (500-509)	260-265 (500-509)
Continuous service temp	°C (°F)	200 (390)	200 (390)	200 (390)
Shrink temperature	°C (°F)	149-232 (300-450)	149-232 (300-450)	82-232 (180-450)
Deflection temp (66 psi)	°C (°F)	59 (138)	59 (138)	59 (138)
Deflection temp (264 psi)	°C (°F)	57 (134)	57 (134)	57 (134)
Mechanical				
Tensile strength at break	MPa	25-28	25-28	25-28
Elongation at break	%	320	320	320
Compressive strength	psi	15.2	15.2	15.2
Impact strength	Ft-Lb/in	No Break	No Break	No Break
Flexural Modulus	MPa	654.6	654.6	654.6
Tensile Modulus	psi	344.5	344.5	344.5
Hardness	Shore D	D-55	D-55	D-55
Electrical				
Dielectric const at 10^3 Hz		2.1	2.1	2.1
Dielectric const at 10^6 Hz		2.1	2.1	2.1
Dielectric DF at 10^3 Hz		0.0001	0.0001	0.0001
Dielectric DF at 10^6 Hz		0.0008	0.0008	0.0008

About Us

Founded in 1971, Optinova is a world-leading extrusion partner for advanced medical and industrial tubing. With sales offices around the world and four extrusion plants in Finland, Thailand, and the US, we are serving partners from 50+ countries across industries.

Contact Us

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