



A division of CSA Technical Solutions, LLC  
1959 Hammondville Road Pompano Beach, FL 33069  
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[www.BuyHeatShrink.com](http://www.BuyHeatShrink.com)

## 4:1 PTFE Heat Shrink

PTFE heat shrink tubing has a very high continuous use temperature (260°C), and outstanding chemical resistance. It is available in 2:1 and 4:1 shrink ratios and meets or exceeds the most stringent commercial (UL VW-1, UL 910, NFPA262) and military standards (AMS-DTL-23053/12).

While it is the best of the entire fluoropolymer heat shrink tubing family, PTFE is also the most difficult to shrink due to its extremely high shrinking temperature (325-340°C). A heat gun or a welding torch can be used, but it is not recommended due to the tendency for the material to have localized over-heating or under-heating. It is extremely important when shrinking PTFE that the material is uniformly heated to provide even shrinking. We recommend you use a controlled temperature oven; although this is obviously impractical for large harnesses or areas adjacent to temperature sensitive components.

### **Features:**

- Continuous operating temperature -454°F to 500°F (-270°C to 260°C)
- Outstanding resistance to almost any chemical known (exceptions: alkali metals in molten state, fluorine gas at high temperatures, chlorine trifluoride).
- FDA and USP Class VI approved
- Very low coefficient of friction
- Good dielectric strength
- Flame rating UL94 V0 and VW-1
- Limiting Oxygen Index greater than 95
- ETO and autoclave sterilizable
- Mil spec approved (AMS-DTL-23053/12)

### **A Few Notes on Shrinking PTFE:**

1. Always assure good ventilation in the immediate work area prior to beginning the heat shrink process. Fumes may cause nausea and dizziness.
2. It is imperative that the tubing be heated uniformly until it becomes clear (gel state). This transition from crystalline to amorphous must take place, since shrinkage will only occur during recovery from the gel state (re-crystallizing).
3. When using a mandrel to shrink the tubing, it is important to pre-heat the mandrel to assure even and uniform shrinkage.
4. If the tubing begins to crack, chances are you overheated the material.
5. Also, higher shrink ratios will require higher shrink temperatures.



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**Dimension**

Part Number	Mil Spec #	Size			
	AMS-DTL-23053	Diameter	Before Shrinking	After Shrinking	Wall Thickness
HSTFE4-0078	/12-501	5/64"	0.078"	0.025"	0.009"
HSTFE4-0125	/12-502	1/8"	0.125"	0.037"	0.012"
HSTFE4-0188	/12-503	3/16"	0.187"	0.050"	0.012"
HSTFE4-025	/12-504	1/4"	0.250"	0.063"	0.012"
HSTFE4-0313	/12-505	5/16"	0.312"	0.078"	0.012"
HSTFE4-0375	/12-506	3/8"	0.375"	0.96"	0.012"
HSTFE4-0438	/12-507	7/16"	0.438"	0.112"	0.012"
HSTFE4-050	/12-508	1/2"	0.500"	0.0144"	0.015"
HSTFE4-0625	/12-510	5/8"	0.625"	0.178"	0.015"
HSTFE4-075	/12-512	3/4"	0.750"	0.224"	0.015"
HSTFE4-0875	/12-513	7/8"	0.875"	0.244"	0.015"
HSTFE4-100	/12-514	1"	1.00"	0.278"	0.015"
HSTFE4-150	/12-516	1-1/2"	1.50"	0.4"	0.015"