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## Heat Shrink Tubing Thin Wall, 2:1 Shrink Ratio (Includes Assortment Packs)

### **Description:**

NTE's Thin Wall Heat Shrink Tubing is a high performance, multi purpose, professional grade, flexible, flame retardant, polyolefin based heat-shrinkable tubing with excellent electrical, chemical and physical properties. This tubing is used extensively in industrial and military applications for cable and wire harnessing, strain relief, insulation, color coding, identification and protection against fluids.

### **Standards:**

- MIL-DTL-23053/5, Class 1 and 3, CSA C22.2 No 198.1
- UL 224, 125°C, VW1 (Except Clear)

### **Features:**

- Available in Black, Blue, Red, Green, Yellow, White, Clear, Brown, Grey, Orange and Violet
- Also available in assorted packages

### **Recommended Shelf Life:**

- 10 – 12 years when stored at  $T_A = +14^\circ$  to  $+104^\circ\text{F}$  ( $-10^\circ$  to  $+40^\circ\text{C}$ ), RH < 70%.

### **Technical Data:**

Properties	Test Method	Typical Value
<b>Physical</b>		
Tensile Strength	ASTM D 638	13 N/mm <sup>2</sup>
Elongation at Break	ASTM D 638	400%
Longitudinal Change	ASTM D 2671	+5%, -5% Maximum
Water Absorption	ASTM D 570	0.15% Maximum
Specific Gravity	ASTM D 792	1.4
<b>Chemical</b>		
Fungus Resistance	MIL-1-7444	Inert
Fluid Resistance	MIL-1-23053/5	Good
Copper Corrosion	ASTM D 2671 B	Good
<b>Thermal</b>		
Continuous Operating Temperature		-55° to +135°C
Minimum Shrink Temperature		> +90°C
Heat Shock (4 Hours at +250°C)	ASTM D 2671	No Dripping, Cracking or Flowing
Heat Aging (168 Hours at +150°C)	ASTM D 638	Elongation 300%
Low Temperature Flexibility (-55°C)	ASTM D 2671 C	No Cracking
Flammability	UL 224 VW 1	Pass (Except Clear)
<b>Electrical</b>		
Voltage Rating		600V
Dielectric Strength	ASTM D 2671	25kV/mm
Volume Resistivity	ASTM D 257	10 @ 14 ohm.cm

**NOTE: July 2018 – NTE certifies that the materials contained in this product meet the requirements of California Prop 65.**



**Products Covered:** (Note 1, Note 2)

NTE Catalog Number						Size (inch)	I.D. (in mm)		Rec. Wall Thickness (mm)
100' Spool	50' Spool	25' Spool	48"	6"	Qty/Pkg		Exp.	Rec.	
47-100100-XX	47-10050-XX	-	47-20048-XX	47-20006-XX	30	3/64	1.2	0.6	0.38
47-101100-XX	47-10150-XX	-	47-20148-XX	47-20106-XX	30	1/16	1.6	0.8	0.40
47-102100-XX	47-10250-XX	-	47-20248-XX	47-20206-XX	30	3/32	2.4	1.2	0.48
47-103100-XX	47-10350-XX	-	47-20348-XX	47-20306-XX	30	1/8	3.2	1.6	0.48
47-104100-XX	47-10450-XX	-	47-20448-XX	47-20406-XX	25	3/16	4.8	2.4	0.50
47-105100-XX	47-10550-XX	-	47-20548-XX	47-20506-XX	20	1/4	6.4	3.2	0.60
47-106100-XX	47-10650-XX	-	47-20648-XX	47-20606-XX	15	5/16	8.0	4.0	0.60
47-107100-XX	47-10750-XX	-	47-20748-XX	47-20706-XX	15	3/8	9.5	4.8	0.60
47-108100-XX	47-10850-XX	-	47-20848-XX	47-20806-XX	12	1/2	12.7	6.4	0.65
47-109100-XX	47-10950-XX	47-10925-XX	47-20948-XX	47-20906-XX	10	3/4	19.1	9.5	0.80
47-110100-XX	47-11050-XX	47-11025-XX	47-21048-XX	47-21006-XX	7	1	25.4	12.7	0.90
47-111100-XX	47-11150-XX	47-11125-XX	47-21148-XX	47-21106-XX	4	1 1/2	38.1	19.1	1.00
47-112100-XX	47-11250-XX	47-11225-XX	47-21248-XX	47-21206-XX	3	2	50.8	25.4	1.10
-	-	-	47-21348-XX	-	1	3	76.2	38.1	1.30

Note 1. Replace XX with: BK = Black, BL = Blue, R = Red, G = Green, Y = Yellow, W = White, CL = Clear, BR = Brown, GR = Grey, OR = Orange and VT = Violet.

Note 2. Premium colors (Brown, Grey, Orange and Violet) are only available in 48" lengths and in sizes from 3/64" up to 1".

**Assorted Thin Wall Packages:**

NTE Part No.	Color	Diameter (Inches)	Length (Inches)	Pieces	Bag/Box
HS-ASST-1	Black	3/32, 1/8, 3/16, 1/4, 3/8, 1/2 (4 Pieces of Each Diameter)	6	24	Bag
HS-ASST-2	Black	1/16 (60 Pieces), 1/8 (40 Pieces), 3/16 (20 Pieces), 1/4 (18 Pieces), 3/8 (10 Pieces), 1/2 (10 Pieces)	2 1/2	158	Box
HS-ASST-3	Red	1/16 (60 Pieces), 1/8 (40 Pieces), 3/16 (20 Pieces), 1/4 (18 Pieces), 3/8 (10 Pieces), 1/2 (10 Pieces)	2 1/2	158	Box
HS-ASST-4	Black	1/16, 3/32, 1/8, 3/16, 1/4, 3/8, 1/2 (4 Pieces of Each Diameter)	4	28	Bag
HS-ASST-5	(2) Black, (2) Red, (2) Clear, (1) Green, (1) Blue, (1) Yellow, (1) White	1/8	6	10	Bag
HS-ASST-6	(2) Black, (2) Red, (2) Clear, (1) Green, (1) Blue, (1) Yellow, (1) White	3/16	6	10	Bag
HS-ASST-7	(2) Black, (2) Red, (2) Clear, (1) Green, (1) Blue, (1) Yellow, (1) White	1/4	6	10	Bag
HS-ASST-8	(2) Black, (2) Red, (2) Clear, (1) Green, (1) Blue, (1) Yellow, (1) White	3/8	6	10	Bag
HS-ASST-9	Black, Red, Clear, Green, Blue, Yellow, White	1/16 (60 Pieces), 3/32 (35 Pieces), 1/8 (25 Pieces), 3/16 (20 Pieces), 1/4 (10 Pieces), 3/8 (10 Pieces)	4	160	Box
HS-ASST-10	(2) Black, (2) Red, (2) Clear, (1) Green, (1) Blue, (1) Yellow, (1) White	1/16	6	10	Bag

**Assorted Thin Wall Packages (Cont'd):**

<b>NTE Part No.</b>	<b>Color</b>	<b>Diameter (Inches)</b>	<b>Length (Inches)</b>	<b>Pieces</b>	<b>Bag/Box</b>
HS-ASST-11	(2) Black, (2) Red, (2) Clear, (1) Green, (1) Blue, (1) Yellow, (1) White	3/32	6	10	Bag
HS-ASST-12	(2) Black, (2) Red, (2) Clear, (1) Green, (1) Blue, (1) Yellow, (1) White	1/2	6	10	Bag