



# 3M™ Heavy Wall Heat Shrink Tubing ITCSN

## Standard Sizes and Dimensions

Product Number	Cable Range Size	Minimum Expanded/ Maximum Recovered I.D.	Cable O.D. Use Range Maximum - Minimum	Certification and Listings
	in. (mm)	in. (mm)	in. (mm)	UL  
ITCSN-0400	12 - 6 AWG (4 - 10 mm <sup>2</sup> )	0.40 / 0.15" (10,2 / 3,8mm)	0.35 - 0.17" (9 - 3,3 mm)	E102356 LR86335
ITCSN-0800	8 - 1/0 AWG (10 - 15 mm <sup>2</sup> )	0.80 / 0.20" (20,3 / 5,1 mm)	0.65 - 0.24" (18 - 5,6 mm)	E102356 LR86335
ITCSN-1100	2 - 4/0 AWG (35 - 95 mm <sup>2</sup> )	1.10 / 0.37" (27,9 / 9,4 mm)	0.88 - 0.40" (24 - 9,4 mm)	E102356 LR86335
ITCSN-1500	3/0 AWG - 400 kcmil (95 - 185 mm <sup>2</sup> )	1.50 / 0.50" (38,1 / 12,7 mm)	1.19 - 0.60" (33 - 12,1 mm)	E102356 LR86335
ITCSN-2000	250 - 750 kcmil (150 - 300 mm <sup>2</sup> )	2.00 / 0.65" (50,8 / 16,5 mm)	1.60 - 0.75" (44 - 19,0 mm)	E102356 LR86335
ITCSN-3000	600 - 1250 kcmil (400 - 625 mm <sup>2</sup> )	3.00 / 1.00" (76,2 / 25,4 mm)	2.25 - 1.20" (63,5 - 25,4 mm)	LR86335
ITCSN-4500	1500 - 2500 kcmil (800 - 1000mm <sup>2</sup> )	4.50 / 1.50" (114,3 / 38,1 mm)	4.00 - 1.50" (101,6 - 38,1 mm)	
ITCSN-6000	2.1 - 4.8" (53 - 122 mm <sup>2</sup> )	6.00 / 1.80" (152,4 / 45,7 mm)	5.50 - 1.80" (139,7 - 45,7 mm)	

## Typical Properties

Not for specifications. Values are typical, not to be considered minimum or maximum. Properties measured at room temperature 73°F (23°C) unless otherwise stated.

Physical Property (Test Method)	Typical Value US units (metric)
<b>Color</b>	Black
<b>Ultimate Tensile Strength</b> (ASTM D412)	2400 PSI (16 Mpa)
<b>Ultimate Elongation</b>	475%
<b>Longitudinal Change</b>	+1, -10%
<b>Secant Modulus (2%)</b> (ASTM D882A)	14,000 PSI (98 Mpa)
<b>Shore D Hardness</b> (ASTM D-2240)	42
<b>Air-Oven Aging</b> [7 days @ 175°F (175°C)] Tensile Strength Elongation	2,680 psi (18 Mpa) 375%
<b>Heat shock</b> (outer wall only) 4 hrs @ 491°F (255 °C)	No dripping, flowing, cracking
<b>Low Temperature Flexibility</b> 4 hrs @ -67°F (-55°C)	No cracking
<b>Specific Gravity</b> (ASTM D792 A-1)	1.28
<b>Continuous Operating Temperature</b> (less adhesive)	-67°F-230°F (-55°C-110°C)

Electrical Property	Typical Value US units (metric)
<b>Dielectric Strength</b> (60 mils) (ASTM 149)	500 V/mil
<b>Volume Resistivity</b> (ASTM D257)	1 x 10 <sup>14</sup> ohm/cm

Chemical Property	Typical Value US units (metric)
<b>Corrosivity</b> (Mil-I-23053/15)	Non-corrosive
<b>Fungus Resistance</b> (ASTM G-21)	Non-nutrient
<b>Water Absorption</b> (ASTM D-570 6.1)	0.05%
<b>Fluid Resistance</b> JR4 Skydrol 600 Solution Gasoline Hydraulic Fluid	>1500 PSI @ V/mil @ 600 V/mil

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Data Sheet

September 2013

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**Description** 3M™ Heavy Wall Heat Shrink Tubing ITCSN is designed to provide reliable performance for electrical splices, connections, and terminations, as well as mechanical and weather resistant protection. This tubing is fabricated from cross-linked polyolefin. The tubing is highly split-resistant and fast-shrinking to provide rapid installation. It comes standard with a factory-applied adhesive/sealant.

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**Agency Approvals & Self Certifications** UL Listed, UL 486D Standard, File E102356  
CSA Certification, File LR86335  
Voltage Rating 600 V  
Direct burial and Submersible  
For use with Listed, Crimp-type, Splice Connectors  
All other product claims are made by 3M and not covered by the UL Listing



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**Features**

- Fast and easy installation
- Thick wall top resists puncture and abrasion damage
- Rugged weather resistant protection
- Versatile, a minimum number of sizes cover the entire range of applications
- Shrink ratio as high as 4:1
- Resists acids and alkalies
- Bonds to a wide variety of substrates
- Reliable and proven
- UV resistant

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**Applications**

- Primary electrical insulation for solid dielectric wire and cable rated to 1000 volts
- For indoor, outdoor or overhead use
- Direct buried or submersible
- Insulating secondary splices
- Physical protection and moisture sealing of high voltage air insulated connectors and lugs, such as lug connections to bus bars
- Relocation of service
- Dig-in repairs
- Sheath repairs

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