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With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# **NST** Tubing

Modified Chlorinated Polyolefin (Neoprene®)

# Data Sheet

## **Product Description**

3M<sup>™</sup> NST Tubing provides superior cutthrough and abrasion resistance and is unaffected by common fluids and solvents. Resistance to oils is excellent. The tubing maintains flexibility at low temperatures and can be readily marked by hot-stamp and print-wheel methods. When heated in excess of 135°C (275°F) NST Tubing rapidly shrinks to a skintight fit. NSTis rated for continuous operation from −70°C (−94°F) to 121°C (250°F).

# **Typical Applications**

NST Tubing is recommended for applications requiring a tough, highly flexible covering. It is particularly useful for fabrication and repair of flexible harnesses and wire bundles and for covering hydraulic couplings. Its superior mechanical properties and broad operating temperature range make it an ideal choice for jacketing cable harnesses and custom-made cables that must operate in severe environmental conditions.

#### **Shrink Ratio**

NST Tubing has a 2:1 shrink ratio. When freely recovered, the tubing will shrink to 50% of its as-supplied internal diameter. The recovered wall thickness is proportional to the degree of recovery.

# **Standard Color**

Black.

### **Standard Packaging**

Spools.

### **Ordering Information**

Order NSTTubing by product name, size equivalent to the expanded inside diameter, package type and color. Always order the largest size that will shink snugly over the component to be covered. When ordering NST Tubing, please indicate the applicable specification required.

Example: NST, 3/16", spools, black.

## **Standard Sizes and Dimensions**

Ordering Size	Expanded I.D. (Minimum) in. (mm)		Recovered I.D. (Maximum) in. (mm)		Recovered Wall Thickness (Nominal) in. (mm)	
1/8	.125	(3,18)	.072	(1,83)	.030	(0,76)
3/16	.187	(4,75)	.106	(2,69)	.035	(0,89)
1/4	.250	(6,35)	.125	(3,18)	.035	(0,89)
3/8	.375	(9,53)	.187	(4,75)	.040	(1,02)
1/2	.500	(12,70)	.250	(6,35)	.048	(1,22)
5/8	.625	(15,88)	.312	(7,92)	.052	(1,32)
3/4	.750	(19,05)	.375	(6,99)	.057	(1,45)
7/8	.875	(22,23)	.437	(11,10)	.065	(1,65)
1	1.000	(25,40)	.500	(12,70)	.070	(1,78)
1-1/4	1.250	(31,75)	.625	(15,54)	.087	(2,21)
1-1/2	1.500	(38,10)	.750	(19,05)	.095	(2,41)
1-3/4	1.750	(44,45)	.875	(22,23)	.107	(2,72)
2	2.000	(50,80)	1.000	(25,40)	.110	(2,79)
3	3.000	(75,20)	1.500	(38,10)	.125	(3.18)

### **Typical Properties**

Applicable Specification MIL-R-46846, Type I, Class 1; MIL-DTL-23053/1, Class 1, 2; AMS-3623 (SC-X-15112 available on request)

Physical		Electrical			
Tensile Strength	2100 PSI	Dielectric Strength	800 V/mil		
Ultimate Elongation	500%	Volume Resistivity 1012 ohm-cm			
Longitudinal Change	+1, -10%				
Specific Gravity	1.3	Chemical			
Operating Temperature	–70°C to	Corrosion Resistance	Non-		
Range	+121°C	Ourosion resistance	corrosive		
Shrink Temperature	135°C	Fuel & Oil Resistance	Excellent		
(Min.)	(275°F)	Solvent Resistance	Good		
, ,	cracking	Abrasion Resistance Acids & Alkalis	Excellent		
Flammability Self-e	extinguish	Resistance	Excellent		

Technical information provided consists of typical product data and should not be used for specification purposes. Unless otherwise noted, all tests are performed at room temperature.

Limited Warranty – 3M expressly warrants that for a period of ninety days from the date of purchase, 3M static control products will be free of defects in materials (parts) and workmanship (labor). Defects occurring during the warranty period will be repaired or products will be replaced at 3M's option and expense, if 3M receives notice during the warranty period. Defective products must be returned to 3M with proof of purchase date. Warranty Exclusions - THE FOREGOING EXPRESS WARRANTYIS MADE IN LIEU OF ALLOTHER PRODUCT WARRANTIES, EXPRESS AND IMPLIED, INCLUDING FITNESS AND MERCHANTIBILITY. The express warranty will not apply to defects or damage due to accidents, neglect, misuse, alterations, operator error, or failure to properly maintain, clean, or repair products. Limit of Liability – In no event will 3M or Seller be responsible or liable for special, incidental, or consequential losses or damages, whether based in tort or contract. Fulfillment of 3M's warranty obligations will be Customer's exclusive remedy and 3M's and Seller's limit of liability for any breach of warranty or otherwise. For your nearest distributor or to order, call 1-800-328-1368

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**3M Electrical Specialties Division**