



NST Tubing

Modified Chlorinated Polyolefin (Neoprene®)

Data Sheet

Product Description

3M™ NST Tubing provides superior cut-through 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. NST is 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 NST Tubing by product name, size equivalent to the expanded inside diameter, package type and color. Always order the largest size that will shrink 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)		Recovered I.D. (Maximum)		Recovered Wall Thickness (Nominal)	
	in.	(mm)	in.	(mm)	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

Tensile Strength 2100 PSI
Ultimate Elongation 500%
Longitudinal Change +1, -10%
Specific Gravity 1.3
Operating Temperature Range -70°C to +121°C
Shrink Temperature 135°C (275°F) (Min.)
Low Temperature Flexibility (4 hrs. @ -70°C) No cracking
Flammability Self-extinguish

Electrical

Dielectric Strength 800 V/mil
Volume Resistivity 10¹² ohm-cm

Chemical

Corrosion Resistance Non-corrosive
Fuel & Oil Resistance Excellent
Solvent Resistance Good
Abrasion Resistance Excellent
Acids & Alkalies 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.