

- Excellent thick-wall insulation and abrasion protection
- Expansion ratios as high as 3:1
- Available in flame retarded material

BSTS/BSTS-FR

General purpose
heat-shrinkable tubing

Raychem

General Purpose tubing (BSTS) and flame retarded tubing (BSTS-FR) provide enhanced protection under adverse environmental conditions. BSTS tubing is thermally stabilised, modified polyolefin heat-shrinkable tubing. It has excellent electrical

properties and is highly resistant to moisture, fungus and weathering. Its expansion ratio (proportion of expanded diameter to fully recovered diameter) can be as high as three to one. BSTS tubing is supplied without factory-applied sealant or adhesive. The tubing

can be used with S-1278/S-1305 tape sealant or S-1297 adhesive tape to provide a seal in non-pressurised applications. The tubing is easily removed by applying a small amount of heat to it, then slitting it with a knife and peeling it away with a pair of pliers.

Ordering information



Internal diameter				Wall thickness			
D (min) Expanded as supplied		d (max) Recovered after heating		W (nom) Total wall recovered after heating			
mm	Inches	mm	Inches	mm	Inches	Size description	
7.7	(0.3)	2.6	(0.1)	1.5	(0.06)	BSTS-03	
10.2	(0.4)	3.9	(0.15)	1.5	(0.06)	BSTS-04	
19.1	(0.75)	5.6	(0.22)	1.5	(0.06)	BSTS-07M	
19.1	(0.75)	5.6	(0.22)	2.4	(0.09)	BSTS-07	
27.9	(1.1)	9.5	(0.38)	2.7	(0.11)	BSTS-11M	
27.9	(1.1)	9.5	(0.38)	3.0	(0.12)	BSTS-11	
33.1	(1.3)	9.6	(0.38)	2.7	(0.11)	BSTS-13M	
33.1	(1.3)	9.6	(0.38)	3.0	(0.12)	BSTS-13	
43.2	(1.7)	12.7	(0.5)	3.0	(0.12)	BSTS-17M	
43.2	(1.7)	12.7	(0.5)	3.6	(0.14)	BSTS-17	
50.8	(2.0)	19.1	(0.75)	3.0	(0.12)	BSTS-20M	
50.8	(2.0)	19.1	(0.75)	3.9	(0.15)	BSTS-20	
68.6	(2.7)	22.9	(0.9)	3.9	(0.15)	BSTS-27	
76.2	(3.0)	31.8	(1.25)	3.9	(0.15)	BSTS-30	
88.9	(3.5)	31.8	(1.25)	3.9	(0.15)	BSTS-35	Available in 4FT (1.2m) length only
101.6	(4.0)	44.5	(1.75)	3.9	(0.15)	BSTS-40	
114.3	(4.5)	44.5	(1.75)	3.9	(0.15)	BSTS-45	Available in 4FT (1.2m) length only

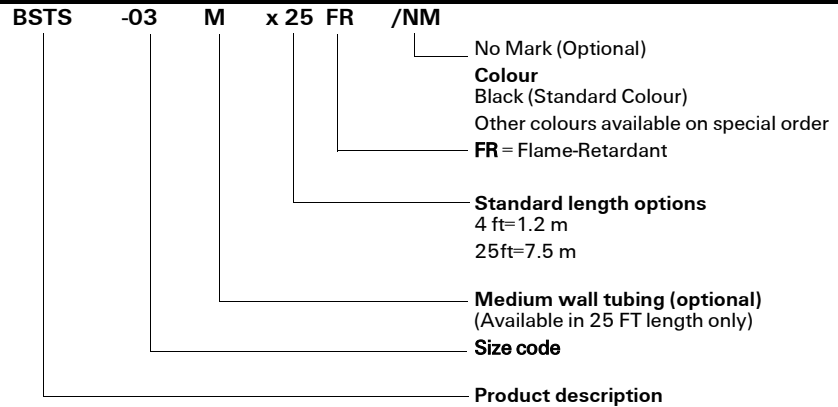
*'M' suffix denotes medium wall availability.

Adhesive/Sealant Descriptions:

S1297	General purpose hot melt adhesive tape (supplied separately)
S1278	Non flame retarded sealant tape (supplied separately)
S1305	Flame retarded sealant tape (supplied separately)

BSTS/BSTS-FR

Ordering example:



Temperature rating

Operating temperature range:	-55°C to +90°C
Minimum recovery temperature:	+120°C

Performance

BSTS is a black, crosslinked, polyolefin-based material. BSTS-FR is flame retarded and heat resistant.			
	Test method	BSTS-FR	BSTS
Mechanical			
Tensile strength (min)	ASTM D638	8.4 MPa	8.4 MPa
Ultimate elongation (min)	ASTM D638	200%	200%
2% secant modulus (max)	ASTM D882	172 MPa	
Heat ageing	ASTM D2671, D412	(168 h at 175°C)	(168 h at 150°C)
Tensile strength (min)	ASTM D638	7 MPa	7 MPa
Ultimate elongation (min)	ASTM D638	100%	100%
Heat shock			
4 h at 225°C	MIL-I-23053/15A	Pass	Pass
Low temperature flexibility			
4 h at -55°C	MIL-I-23053/15A	Pass	Pass
Electrical			
Dielectric strength	ASTM D2671	7.9 MV/m	7.9 MV/m
Volume resistivity (min)	ASTM D876	10 ¹³ ohm.cm	10 ¹³ ohm.cm
Flammability			
Flammability (method B)	MIL-I-23053/15A	15 secs (max)	N/A
Chemical			
Corrosion	MIL-I-23053/15A	Pass	Pass
Water absorption (max)	ASTM D570	0.5%	0.5%
Specific gravity (max)	ASTM D1505	1.5	1.1
Fungus resistance	ASTM G21	1 or less	N/A
Fluid resistance			
(24 h at room temperature)	MIL-I-23053/15A		
De-icing fluid (MIL-A-8243)			
Hydraulic fluid (MIL-H-5606)			
JP8 (MIL-T-83133)			
Lubricating oil (MIL-L-7808)			
Lubricating oil (MIL-L-23699)			
5% NaCl (O-S-1926)			
After immersion in the above fluids:			
Tensile strength (min)	ASTM D638	5 MPa	5 MPa

BSTS/BSTS-FR

Specifications

Type	Raychem
BSTS	RW 2017
BSTS-FR	RW 2017
S-1297	RW 2019
S-1278	RW 2020
S-1305	RW 2020

Raychem and BSTS/BSTS-FR are trademarks of Tyco Electronics Corporation.

All of the above information, including illustrations, is believed to be reliable. Users, however, should independently evaluate the suitability of each product for their application. Tyco Electronics makes no warranties as to the accuracy or completeness of the information and disclaims any liability regarding its use. Tyco Electronics only obligations are those in the Standard Terms and Conditions of Sale for this product and in no case will Tyco Electronics be liable for any incidental, indirect or consequential damages arising from the sale, resale, use or misuse of the product. Tyco Electronics Specifications are subject to change without notice. In addition Tyco Electronics reserves the right to make changes in materials or processing, without notification to the Buyer, which do not affect compliance with any applicable specification.

Tyco Electronics Corporation
300 Constitution Drive
Menlo Park, CA 94025-1164
USA
Tel: (800)-926 2425 (US and Canada)
Tel: +1 650 361 3860 (All other countries)

Tyco Electronics UK Ltd
Faraday Road, Dorcan,
Swindon, Wiltshire SN3
5HH
Tel: (44)-1793-528171

Tyco Electronics Raychem K.K.
3816 Noborito, Tama-ku
Kawasaki
Kanagawa 214-8533
Japan
Tel: +81 44 900 5102

Tyco Electronics Singapore PTE Ltd.
26 Ang Mo Kio
Industrial Park 2
Singapore 569507
Tel: +65 4866151

www.tycoelectronics.com

RI0032