

Copper Tube, Fittings, Fixtures and Accessories

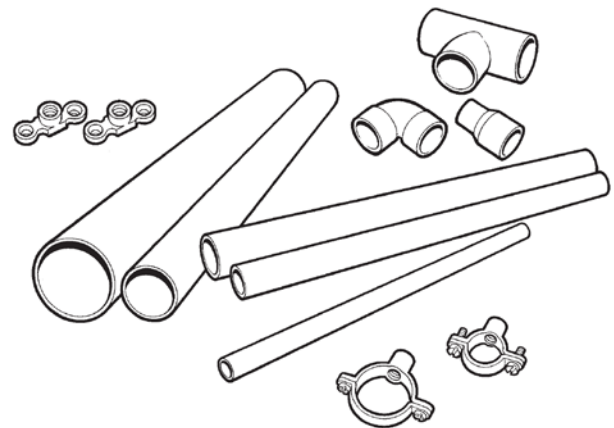
BS EN 13348 Degreased Medical Grade Seamless Copper Tube

Classification

- Pipeline solutions for medical installations
- Degreased copper tubes to BS EN 13348 and Kite marked, as specified in the latest NHS specification HTM 02-01 (which replaces HTM 2022)

Services

- Oxygen
- Nitrous Oxide
- 50% Oxygen / 50% Nitrous Oxide
- Air 400 kPa (4 bar)
- Air 700 kPa (7 bar)
- Medical Vacuum
- Nitrogen
- Carbon Dioxide
- Helium
- Xenon
- Specific mixtures of the above gases
- AGSS



Applications for BS EN 13348

- Specifically designed for copper medical gas and vacuum systems, recognising the specialist requirements of the medical gas market
- Supplied in 6 m lengths and individually capped as standard
- BS EN 13348 supersedes earlier 'hybridised' copper tube standards such as BS EN 1057 and BS 2871 Part 1 Table X quoted in HTM 2022, HTM02-01 and NHS engineering specification C11
- BS EN 1057 is still available
- Kite marked tube as defined in Section 5 of C11

Specific Benefits of using BS EN 13348

- Tighter limits on cleanliness determination
- Improved identification to avoid confusion with similar sizes of water service tube
- Lawton Tubes were the first British company to be awarded the Kite mark licence to supply to this standard, which now covers copper tube up to and including 108 mm.

Specification

Size	Thickness	Length	Tubes per bundle	Working Pressure
12 mm	0.6 mm	6 metres	10 tubes	77 bar
15 mm	0.7 mm	6 metres	10 tubes	63 bar
22 mm	0.9 mm	6 metres	10 tubes	58 bar
28 mm	0.9 mm	6 metres	10 tubes	51 bar
35 mm	1.0 mm	6 metres	1 tube	40 bar
42 mm	1.0 mm	6 metres	1 tube	42 bar
54 mm	1.0 mm	6 metres	1 tube	27 bar
76 mm	1.5 mm (min)	6 metres	1 tube	29 bar
108 mm	1.5 mm (min)	6 metres	1 tube	16 bar



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BS EN 13348 Degreased Medical Grade Seamless Copper Tube

Manufacturing Standard

- BS EN 13348
- Unified wall thickness

Chemical composition

- CU.DHP to 1190-1
- CW024A to EN1412

Temper

- 12 mm to 54 mm - Half hard (Designated R250)
- 76 mm to 108 mm - Hard (Designated R290)

Cleanliness

- Maximum total Carbon content 0.20 mg/dm²

Packaging

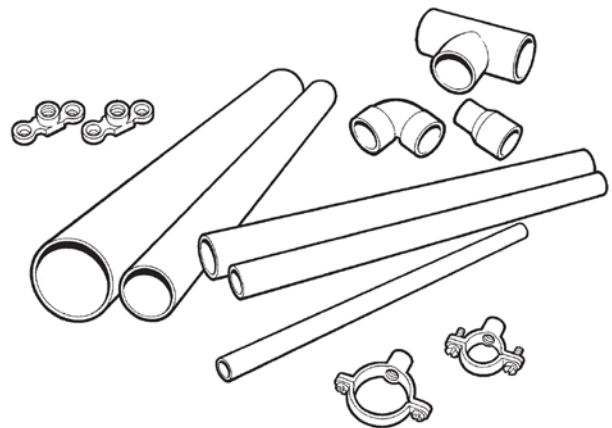
- Each tube is individually end capped, and tube bundles are polythene wrapped and sealed

Identification and Traceability

- Each tube is labelled with the
 - SIZE
 - BSI KITEMARK
 - EN 13348
 - TEMPER
 - EXTRUDER

Note:

12, 15, 22 and 28 mm lengths are date and batch labelled via inkjet marking



Copper Tube, Fittings, Fixtures and Accessories

Fittings, Fixtures and Accessories

Copper Fittings

- Straight couplings
- 90° elbows
- 45° elbows
- Equal tees
- Reducing tees
- Reducing couplings
- Insert reducers
- Tube end caps

Copper Fittings Standards

- BS 6017, Non arsenical copper
- BS 1254-1, end feed capillary
- Individually bagged and marked degreased for oxygen use, as per 13.16 in HTM 2022

Silver Solder (for Site Installations)

- Type of Product: Silver brazing alloy
- Composition: 6% Silver
87% Copper
7% Phosphorous
- Melting Range: 645 to 720°C
- DIN Standard: DIN 8513 : L-Ag6P
- Appearance: Copper coloured metal
- Health Hazard Data: TLV Odour threshold
- Silver: 0.1 mg/m³ as fume
- Copper: 0.2 mg/m³ as fume
- Phosphorous: 1 mg/m³ as phosphoric acid

For in-house manufacturing purposes Penlon Medical gas Solutions uses a higher content of silver for soldering processes (approximately 55%). This is available on request.

Pipework Support Systems

- Copper tube wall or ceiling fixing components
- Brass single munsen rings
- Brass double munsen rings
- Brass hospital brackets
- Threaded studding
- Screws and anchors

Gas Identity Tape

- 150 mm wide x 33 m long tape available for:
 - Oxygen
 - Nitrous Oxide
 - 50% Oxygen / 50% Nitrous Oxide
 - Air 400 kPa (4 bar)
 - Air 700 kPa (7 bar)
 - Medical Vacuum
 - AGSS
 - Exhaust
- 50 mm x 33 m directional arrow tape
- 50 mm x 33 m Industrial gases, please contact the sales department for further information

