KE KELIT® NEW ZEALAND

MedBraze Specification
Medical Gas Tubes & Fittings

Specification: Medical Gas Degreased Copper Tube to EN 13348 & Fittings to EN 1254-1

Pipework

Manufacturing Standard:

- EN 13348
- Copper and copper alloys – Seamless, round copper tubes for medical gases or vacuum

Quality Control:

- ISO 9001

Product Material and Designation:

- Cu + Ag: min. 99.90 %;
- 0.015 % ≤ P ≤ 0.040 %
- This copper grade is designated as either Cu-DHP or CW024A

Cleanliness

- The inner and outer surface of the tubes shall be clean and smooth. To avoid contamination of the gas passing through the pipeline, the inner surface shall not contain any detrimental residues.
- Tested in accordance with EN 723 (Combustion method for determination of the carbon content on the inner surface of copper tubes or fittings). Determining lubricant residue as total carbon content by measuring carbon dioxide generated, the lubricant residue on the inner surface of the tube shall conform to the following requirements:

Outside Diameter (mm)		Value (mg/dm^2)
Over	Up to and including	Maximum
6	133	0.20
133	219	0.38

Delivered State:

- Each tube is capped at both ends to maintain the internal cleanliness of the tube under normal conditions of handling and storage. Capped tubes are then bundled and wrapped prior to shipment from the supplier.
- Tubes delivered in 5.8m lengths.
- Permanently marked with the following at intervals no greater than 600mm: The number of the European Standard (EN 13348), Outside Diameter x Wall Thickness, Identification of Tube Hardness, Manufacturers Identification, Date of Production.

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Fittings

Manufacturing Standard:

- EN 1254-1
- Copper and copper alloys – Plumbing fittings – Part 1: Fittings with end for capillary soldering or capillary brazing to copper tubes

Quality Control:

- ISO 9001

Product Material and Designation:

- Cu + Ag: min. 99.90 %;
- 0.015 % ≤ P ≤ 0.040 %
- This copper grade is designated as either Cu-DHP or CW024A

Cleanliness

- EN 1254-1 dictates that the maximum total carbon level on the internal surfaces of the fitting shall not exceed 1.0 mg/dm^2. For this fitting range, additional steps are taken to be cleaned in accordance with the requirements of EN 13348.

Delivered State:

- All fittings are delivered in individual sealed bags to preserve the cleaned and degreased surface of the fittings.
- Fitting and packaging are marked with product information and identification for their specific use for medical gas installations.

Pipeline Jointing

Methodology:

- Guidelines detailed in the Health Technical Memorandum 02-01: Medical gas pipeline systems (HTM-02-01) are to be followed.

Brazing Material:

- When brazing copper to copper joints:
  a. The brazing joint should be made using a silver-copper-phosphorous brazing alloy CP104 to BS EN 1044:1999. No flux should be used;
  b. Ensure adequate protection of adjacent pipe runs and other surfaces