

Summary of the Indian Standard for Copper Tubes for Plumbing (IS 14810:2000).

This standard covers phosphorized (DHP) copper tubes suitable for general plumbing and similar applications for the conveyance of fluids, including water, and these tubes are commonly used with solder, flared, or compression-type fittings.

The different types of copper tubes specified in the standard are:

- Annealed Copper Tubes (Micro Bore)
- Half-Hard Copper Tubes
- Half-Hard and Annealed Copper Tubes
- Hard Drawn Copper Tubes

The standard enumerates dimensional specifications: outside diameter (maximum and minimum), wall thickness, and maximum working pressure for size ranges from 6 mm to 159 mm.

The standard mandates that the raw material used for manufacturing copper tubes for plumbing shall conform to IS 191. It also specifies that copper tubes for plumbing shall be round, smooth, clean, and free from harmful defects and deleterious films in the bore. The standard stipulates that the copper tubes must be solid drawn and both ends must be drafted and sealed.

The standard prescribes the requirements for

- Tensile Testing: Tubes must meet strength requirements, with tests performed according to IS 1608.
- Drift Expanding Test: Required for non-annealed tubes to ensure no cracking or flow.
- Hydrostatic Testing: Each tube to undergo a 5-second pressure test with different stress values for each condition

The standard enumerates sampling for testing and marking requirements and information to be provided by the purchaser before placing an order.

This standard provides comprehensive guidelines for manufacturers and purchasers of copper tubes used in plumbing applications, ensuring consistency in quality and specifications across the industry.