



## **Copper — Seamless tubes for air-conditioning and refrigeration**



AS 1571:2020

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The following are represented on Committee MT-002:

- Australian Industry Group
- Australian Institute of Refrigeration Air Conditioning and Heating
- Consumer Electronics Suppliers Association
- International Copper Association Australia
- Weld Australia

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## **Copper — Seamless tubes for air-conditioning and refrigeration**

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## Preface

This document was prepared by the Standards Australia Committee MT-002, Copper and Copper Alloys, to supersede AS/NZS 1571:1995, *Copper — Seamless tubes for airconditioning and refrigeration*.

After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this document as an Australian Standard rather than an Australian/New Zealand Standard.

The objective of this document is to specify requirements for round seamless copper tubes for use in air-conditioning and refrigeration.

The major changes in this edition include —

- (a) increase in the range of sizes for 1/2H tubes;
- (b) provision that combination of selection of diameter and wall thickness must conform to AS 4041;
- (c) limitations on the minimum wall thickness of tubes being flared;
- (d) refinement of the method of testing for cleanness; and
- (e) addition of the calculation for determining safe working pressure.

The terms "normative" and "informative" are used in Standards to define the application of the appendices to which they apply. A "normative" appendix is an integral part of a Standard, whereas an "informative" appendix is only for information and guidance.

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## NOTES

# Australian Standard®

## Copper — Seamless tubes for air-conditioning and refrigeration

### 1 Scope

This document specifies the requirements for round, seamless copper tubes, manufactured from phosphorus-deoxidized copper containing high residual phosphorus and intended for use in air-conditioning and refrigeration.

NOTE Guidance on information to be supplied by the purchaser to the manufacturer or supplier at the time of enquiry and order are contained in [Appendix A](#).

### 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document.

AS 1733, *Methods for the determination of grain size in metals*

AS 1817.1, *Metallic materials—Vickers hardness test, Method 1: Test method (ISO 6507-1:1997, MOD)*

AS 2084, *Non-destructive testing—Eddy current testing of metal tubes*

AS 2706, *Numerical values—Rounding and interpretation of limiting values*

AS 4041, *Pressure piping*

ASTM B280, *Standard specification for seamless copper tube for air conditioning and refrigeration field service*

ASTM E243, *Standard practice for electromagnetic (Eddy current) examination of copper and copper-alloy tubes*

EN 723, *Copper and Copper Alloys — Combustion Method for Determination of the Carbon Content on the inner surface of copper tubes or fittings*

### 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

#### 3.1

##### **coil**

annealed copper tube supplied in a coiled form

EXAMPLE Pancake coil, wound pack, or pair coil.

#### 3.2

##### **may**

indicates the existence of an option

#### 3.3

##### **mean outside diameter**

half the sum of two outside diameter measurements taken at right angles to each other on one cross-section of the tube

#### 3.4

##### **shall**

indicates that a statement is mandatory