
**Wrought aluminium and aluminium
alloys — Cold-drawn rods/bars, tubes
and wires —**

**Part 1:
Technical conditions for inspection
and delivery**

*Aluminium et alliages d'aluminium corroyés — Barres, tubes et fils
étirés à froid —*

Partie 1: Conditions techniques de contrôle et de livraison



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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 79, *Light metals and their alloys*, Subcommittee SC 6, *Wrought aluminium and aluminium alloys*.

This third edition cancels and replaces the second edition (ISO 6363-1:2012), which has been technically revised. The main changes are as follows:

- JIS H1305 has been added as an option for the chemical composition analysis method;
- errors have been corrected and expressions modified throughout.

A list of all parts in the ISO 6363 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Wrought aluminium and aluminium alloys — Cold-drawn rods/bars, tubes and wires —

Part 1: Technical conditions for inspection and delivery

1 Scope

This document specifies the technical conditions for the inspection and delivery of wrought aluminium and aluminium alloys rods/bars, tubes and wires for general engineering applications.

It is applicable to products which are extruded and then cold drawn.

It does not apply to:

- products which are rolled and then cold drawn, including seam-welded tubes;
- forging stock, wire for drawing stock;
- drawn wires for aeronautical application, electrical or welding purposes.

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. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 2107, *Aluminium and aluminium alloys — Wrought products — Temper designations*

ISO 6362-7, *Wrought aluminium and aluminium alloys — Extruded rods/bars, tubes and profiles — Part 7: Chemical composition*

ISO 6363-2, *Wrought aluminium and aluminium alloys — Cold-drawn rods/bars, tubes and wires — Part 2: Mechanical properties*

ISO 6363-3, *Wrought aluminium and aluminium alloys — Cold-drawn rods/bars, tubes and wires — Part 3: Tolerances on form and dimensions for drawn rods/bars and wires*

ISO 6363-4, *Wrought aluminium and aluminium alloys — Cold-drawn rods/bars, tubes and wires — Part 4: Tolerances on form and dimensions for drawn rectangular bars and wires*

ISO 6363-5, *Wrought aluminium and aluminium alloys — Cold-drawn rods/bars, tubes and wires — Part 5: Tolerances on form and dimensions for drawn square and hexagonal bars and wires*

ISO 6363-6, *Wrought aluminium and aluminium alloys — Cold-drawn rods/bars, tubes and wires — Part 6: Tolerances on form and dimensions for drawn round tubes*

ISO 6892-1, *Metallic materials — Tensile testing — Part 1: Method of test at room temperature*

ISO 9591, *Corrosion of aluminium alloys — Determination of resistance to stress corrosion cracking*

EN 2004-1, *Aerospace series — Test methods for aluminium and aluminium alloy products — Part 1: Determination of electrical conductivity of wrought aluminium alloys*

EN 14242, *Aluminium and aluminium alloys — Chemical analysis — Inductively coupled plasma optical emission spectral analysis*

ASTM B557M, *Standard Test Methods for Tension Testing Wrought and Cast Aluminum- and Magnesium-Alloy Products*

ASTM E34, *Standard Test Methods for Chemical Analysis of Aluminum and Aluminum-Base Alloys*

ASTM E607, *Standard Test Method for Atomic Emission Spectrometric Analysis Aluminum Alloys by the Point to Plane Technique Nitrogen Atmosphere*

ASTM E716, *Standard Practices for Sampling and Sample Preparation of Aluminum and Aluminum Alloys for Determination of Chemical Composition by Spectrochemical Analysis*

ASTM E1251, *Standard Test Method for Analysis of Aluminum and Aluminum Alloys by Spark Atomic Emission Spectrometry*

ASTM G47, *Standard Test Method for Determining Susceptibility to Stress-Corrosion Cracking of 2XXX and 7XXX Aluminium Alloy Products*

JIS H1305, *Method for optical emission spectrochemical analysis of aluminium and aluminium alloys*

3 Terms and definitions

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

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1 rod/bar

solid wrought product of uniform cross-section along its whole length, supplied in straight lengths

Note 1 to entry: A rod is normally less than 6 mm in diameter or of minor dimension.

Note 2 to entry: In North America, the minimum diameter or perpendicular distance between parallel faces of a rod is more than 10 mm (0,375 in); below this limit the product is called *wire* (3.3).

Note 3 to entry: The cross-sections are in the shape of circles, squares, rectangles or regular hexagons. Products with a square, rectangular or hexagonal cross-section may have corners rounded along their whole length.

Note 4 to entry: For rectangular bars, the thickness exceeds one tenth of the width. The term “rectangular bar” includes “flattened circles” and “modified rectangles”, of which two opposite sides are convex arcs, the other two sides being straight, of equal length and parallel.

3.2 tube

hollow wrought product of uniform cross-section with only one enclosed void along its whole length, and with a uniform wall thickness, supplied in straight lengths or in coiled form, provided the inner and outer cross-sections are concentric and have the same form and orientation

3.3 wire

wrought product of uniform cross-section along its whole length, supplied in coiled form

Note 1 to entry: In North America, the maximum diameter or perpendicular distance between parallel faces of a wire is less than 10 mm (0,375 in). Above this limit, the product is called “rod” or “bar”.