INTERNATIONAL STANDARD

ISO 6362-1

Second edition
2012-07-01

Wrought aluminium and aluminium alloys — Extruded rods/bars, tubes and profiles —

Part 1: Technical conditions for inspection and delivery

Aluminium et alliages d'aluminium corroyés — Barres, tubes et profilés filés —

Partie 1: Conditions techniques de contrôle et de livraison

Reference number
ISO 6362-1:2012(E)

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Published in Switzerland

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 6362-1 was prepared by Technical Committee ISO/TC 79, *Light metals and their alloys*, Subcommittee SC 6, *Wrought aluminium and aluminium alloys*.

This second edition cancels and replaces the first edition (ISO 6362-1:1986), which has been technically revised.

ISO 6362 consists of the following parts, under the general title *Wrought aluminium and aluminium alloys — Extruded rods/bars, tubes and profiles*:

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

— *Part 2: Mechanical properties*

— *Part 3: Extruded rectangular bars — Tolerances on shape and dimensions*

— *Part 4: Profiles — Tolerances on shape and dimensions*

— *Part 5: Round, square and hexagonal bars — Tolerances on shape and dimensions*

— *Part 6: Round, square, rectangular and hexagonal tubes — Tolerances on shape and dimensions*

— *Part 7: Chemical composition*

Wrought aluminium and aluminium alloys — Extruded rods/ bars, tubes and profiles —

Part 1: Technical conditions for inspection and delivery

1 Scope

This part of ISO 6362 specifies the technical conditions for inspection and delivery of wrought aluminium and aluminium alloy rods/bars, tubes and profiles for general engineering applications.

It applies to extruded products, but does not apply to the following:

— forging stock;

— extruded precision profiles in alloys A6060 and A6063;

— products delivered in coils;

— coiled tubes cut to lengths.

2 Normative references

The following referenced documents are indispensable for the application 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 6362-2, *Wrought aluminium and aluminium alloys — Extruded rods/bars, tubes and profiles — Part 2: Mechanical properties*

ISO 6362-3, *Wrought aluminium and aluminium alloys — Extruded rods/bars, tubes and profiles — Part 3: Extruded rectangular bars — Tolerances on shape and dimensions*

ISO 6362-4, *Wrought aluminium and aluminium alloys — Extruded rods/bars, tubes and profiles — Part 4: Profiles — Tolerances on shape and dimensions*

ISO 6362-5, *Wrought aluminium and aluminium alloys — Extruded rods/bars, tubes and profiles — Part 5: Round, square and hexagonal bars — Tolerances on shape and dimensions*

ISO 6362-6, *Wrought aluminium and aluminium alloys — Extruded rods/bars, tubes and profiles — Part 6: Round, square, rectangular and hexagonal tubes — Tolerances on shape and dimensions*

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

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

ISO 7438, *Metallic materials — Bend test*

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 Atomic Emission Spectromety*

3 Terms and definitions

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

3.1
rod/bar
solid wrought product of uniform cross-section along its whole length, supplied in straight lengths

NOTE 1 Rod is normally less than 6 mm in diameter or minor dimension.

NOTE 2 In North America, the minimum diameter of a rod is 9,525 mm (0,375 in). Below this limit the product is called wire.

NOTE 3 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 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

NOTE The cross-sections are in the shape of circles, squares, rectangles or regular hexagons. Hollow products with square, rectangular or regular hexagonal cross-sections may have corners rounded along their whole length.

3.3
profile
wrought product of uniform cross-section along its whole length, with a cross-section other than rod/bar, tube, sheet or strip, supplied in straight lengths or in coiled form and where the product is long in relation to its cross-sectional dimensions

NOTE According to the form of its cross-section, it is called:

a) hollow profile: the cross-section includes either one enclosed void, provided that the cross-section is other than tube, or more than one enclosed void;

b) solid profile: the cross-section does not include any enclosed void.

3.4
inspection lot
consignment, or a part thereof, submitted for inspection, comprising products of the same grade or alloy, form, temper, size, shape, thickness or cross-section and processed in the same manner