

Translated and Published by Japanese Standards Association

## $JIS \; H \; 4100^{\,:\, 2022}$

### (JAA/JSA)

# Aluminium and aluminium alloy extruded profiles

Date of Establishment: 1970-05-01

Date of Revision: 2022-12-20

Date of Public Notice in Official Gazette: 2022-12-20

Investigated by: Japanese Industrial Standards Committee

Standards Board for ISO area

Technical Committee on Metal and Inorganic Materials

JIS H 4100 : 2022, First English edition published in 2023-07

Translated and published by: Japanese Standards Association Mita MT Building, 3-13-12, Mita, Minato-ku, Tokyo, 108-0073 JAPAN

> In the event of any doubts arising as to the contents, the original JIS is to be the final authority.

© JSA 2023

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

Printed in Japan

#### Contents

#### Page

Introduction1	
1	Scope1
2	Normative references ······1
3	Term and definition
4	Alloy number, class and symbol ······3
$5 \\ 5.1 \\ 5.2 \\ 5.3 \\ 5.4 \\ 5.5 \\ 5.6$	Quality5Appearance5Chemical composition5Mechanical properties8Bendability13Electric conductivity13Stress corrosion cracking resistance14
$\begin{array}{c} 6 \\ 6.1 \\ 6.2 \\ 6.3 \\ 6.4 \\ 6.5 \\ 6.6 \\ 6.7 \\ 6.8 \end{array}$	Dimensional tolerances and shapes14Tolerances on sectional dimensions14Tolerances on angle of sectional shape24Tolerances on length25Straightness26Flatness27Twist28Contour profile29Tolerances for the corner radii at the specified location and the corner30
7 7.1 7.2 7.3 7.4 7.5 7.6	Tests30Chemical analysis30Tensile test31Hardness test32Bend test32Electric conductivity test33Stress corrosion cracking test33
8	Inspection ····································
9	Marking ····································
Annex	x JA (informative) Comparison table between JIS and corresponding International Standards

#### Foreword

This Japanese Industrial Standard has been revised by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee as the result of proposal for revision of Japanese Industrial Standard submitted by Japan Aluminium Association (JAA)/Japanese Standards Association (JSA) with a draft being attached, based on the provision of Article 12, paragraph (1) of the Industrial Standardization Act applied mutatis mutandis pursuant to the provision of Article 16 of the said Act. This edition replaces the previous edition (JIS H 4100: 2015), which has been technically revised.

However, **JIS H 4100** : 2015 may be applied in the **JIS** mark certification based on the relevant provisions of Article 30, paragraph (1), etc. of the Industrial Standardization Act until 19 December 2023.

This **JIS** document is protected by the Copyright Act.

Attention is drawn to the possibility that some parts of this Standard may conflict with patent rights, published patent application or utility model rights. The relevant Minister and the Japanese Industrial Standards Committee are not responsible for identifying any of such patent rights, published patent application or utility model rights.

#### Aluminium and aluminium alloy extruded profiles

#### Introduction

This Japanese Industrial Standard has been prepared based on **ISO 209** : 2007 (Edition 1), **ISO 6362-1** : 2012 (Edition 2), **ISO 6362-2** : 2014 (Edition 4), **ISO 6362-4** : 2012 (Edition 2) and **ISO 6362-7** : 2014 (Edition 2) with some modifications of the technical contents in order to reflect the actual situations in the Japanese market.

The vertical lines on both sides and dotted underlines indicate changes from the corresponding International Standard. A list of modifications with the explanations is given in Annex JA.

#### 1 Scope

This Standard specifies requirements for the extruded aluminium and aluminium alloy profiles (hereafter referred to as profiles). <u>This Standard applies to all cross-sections</u> not specified in **JIS H 4040** and **JIS H 4080**. For quadrangular, rectangular or hexagonal cross-sections, this Standard applies to those whose corner radii are specified.

NOTE The International Standards corresponding to this Standard and the symbol of degree of correspondence are as follows.

ISO 209 : 2007 Aluminium and aluminium alloys — Chemical composition

ISO 6362-1 : 2012 Wrought aluminium and aluminium alloys — Extruded rods/bars, tubes and profiles — Part 1 : Technical conditions for inspection and delivery

ISO 6362-2 : 2014 Wrought aluminium and aluminium alloys — Extruded rods/bars, tubes and profiles — Part 2 : Mechanical properties

ISO 6362-4 : 2012 Wrought aluminium and aluminium alloys — Extruded rods/bars, tubes and profiles — Part 4 : Profiles — Tolerances on shape and dimensions

ISO 6362-7: 2014 Wrought aluminium and aluminium alloys — Extruded rods/bars, tubes and profiles — Part 7: Chemical composition (overall evaluation : MOD)

In addition, symbols which denote the degree of correspondence in the contents between the relevant International Standards and **JIS** are IDT (identical), MOD (modified), and NEQ (not equivalent) according to **ISO/IEC Guide 21-1**.

#### 2 Normative references

Part or all of the provisions of the following standards, through reference in this text, constitute provisions of this Standard. The most recent editions of the standards (including amendments) indicated below shall be applied.