

# JIS

JAPANESE  
INDUSTRIAL  
STANDARD

Translated and Published by  
Japanese Standards Association

---

---

**JIS H 3110** : 2018

(JCBA/JSA)

**Phosphor bronze and nickel silver  
sheets, plates and strips**

---

ICS 77.150.30

Reference number : **JIS H 3110 : 2018 (E)**

H 3110 : 2018

Date of Establishment: 1977-05-01

Date of Revision: 2018-08-20

Date of Public Notice in Official Gazette: 2018-08-20

Investigated by: Japanese Industrial Standards Committee  
Standards Board for ISO area  
Technical Committee on Metal and Inorganic  
Materials

---

JIS H 3110:2018, First English edition published in 2019-02

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 2019

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

HT/AT

PROTECTED BY COPYRIGHT

## Contents

		Page
1	Scope .....	1
2	Normative references .....	1
3	Terms and definitions .....	1
4	Name, grade and designation .....	1
5	Quality .....	2
5.1	Appearance .....	2
5.2	Chemical composition .....	2
5.3	Mechanical properties .....	3
6	Dimensions and tolerances, and permissible values of shape .....	9
6.1	Dimensions .....	9
6.2	Internal diameters of coil of strips .....	9
6.3	Dimensional tolerances .....	9
6.4	Permissible values for camber of strip .....	10
7	Tests .....	11
7.1	Chemical analysis .....	11
7.2	Tensile test .....	11
7.3	Bend test .....	11
7.4	Hardness test .....	12
8	Inspection .....	12
9	Marking .....	13
10	Report .....	13
	Annex A (informative) Representative dimensions of plates and strips, and representative internal diameters of coil of strips .....	14

## 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 Copper and Brass Association (JCBA)/Japanese Standards Association (JSA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law applicable to the case of revision by the provision of Article 14.

Consequently **JIS H 3110:2012** is replaced with this Standard.

However, **JIS H 3110:2012** may be applied in the **JIS** mark certification based on the relevant provisions of Article 19 Clause 1, etc. of the Industrial Standardization Law until August 19, 2019.

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

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

# Phosphor bronze and nickel silver sheets, plates and strips

## 1 Scope

This Japanese Industrial Standard specifies the rolled phosphor bronze and nickel silver sheets and plates (hereafter referred to as plates), and strips in coil (hereafter referred to as strips).

## 2 Normative references

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

- JIS H 0321 *General rules for inspection of non-ferrous metal materials*
- JIS H 0500 *Glossary of terms used in wrought copper and copper alloys*
- JIS H 1051 *Copper and copper alloys—Determination of copper content*
- JIS H 1052 *Methods for determination of tin in copper and copper alloys*
- JIS H 1053 *Methods for determination of lead in copper and copper alloys*
- JIS H 1054 *Methods for determination of iron in copper and copper alloys*
- JIS H 1055 *Methods for determination of manganese in copper and copper alloys*
- JIS H 1056 *Methods for determination of nickel in copper and copper alloys*
- JIS H 1058 *Copper and copper alloys—Determination of phosphorus content*
- JIS H 1062 *Methods for determination of zinc in copper and copper alloys*
- JIS H 1292 *Copper alloys—Methods for X-ray fluorescence spectrometric analysis*
- JIS Z 2241 *Metallic materials—Tensile testing—Method of test at room temperature*
- JIS Z 2244 *Vickers hardness test—Test method*
- JIS Z 2248 *Metallic materials—Bend test*

## 3 Terms and definitions

For the purpose of this Standard, the terms and definitions given in **JIS H 0500** apply.

## 4 Name, grade and designation

The name, grade and designation of plates and strips are as given in Table 1. The product designation (see Table 3) shall be indicated by the designation given in Table 1 followed by the temper grade.