



JAPANESE  
INDUSTRIAL  
STANDARD

Translated and Published by  
Japanese Standards Association

---

---

JIS H 3270 : 2025

(JCBA/JSA)

**Copper beryllium alloy, phosphor bronze  
and nickel silver rods, bars and wires**

---

ICS 77.150.30

Reference number: JIS H 3270 : 2025 (E)

Date of Establishment: 1977-05-01

Date of Revision: 2025-03-21

Date of Public Notice in Official Gazette: 2025-03-21

Investigated by: Japanese Industrial Standards Committee

Standards Board for ISO area

Technical Committee on Metal and Inorganic Materials

---

JIS H 3270 : 2025, First English edition published in 2025-09

Translated and published by: Japanese Standards Association  
Mita Avanti, 3-11-28, 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 2025

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

HN

## Contents

|   | <b>Page</b> |
|---|-------------|
| 1 Scope .....   | 1           |
| 2 Normative references .....  | 1           |
| 3 Terms and definitions .....   | 2           |
| 4 Designation, grade, class and symbol of grade .....                   | 2           |
| 5 Quality .....   | 4           |
| 5.1 Appearance .....  | 4           |
| 5.2 Chemical composition .....  | 4           |
| 5.3 Mechanical properties .....   | 5           |
| 6 Dimensions and tolerances, and permissible values for shapes .....    | 10          |
| 6.1 Dimensions .....  | 10          |
| 6.2 Dimensional tolerances .....  | 10          |
| 6.3 Permissible values for camber of bars .....                         | 11          |
| 6.4 Angular radius .....  | 12          |
| 7 Tests .....   | 13          |
| 7.1 Chemical analysis .....   | 13          |
| 7.2 Tensile test .....  | 13          |
| 7.3 Hardness test .....   | 13          |
| 7.4 Age-hardening treatment .....                                       | 13          |
| 8 Inspection .....  | 14          |
| 9 Marking .....   | 14          |
| 10 Report .....   | 14          |
| Annex A (informative) Representative dimensions of bars and wires ..... | 16          |

## 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 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 3270 : 2018**), which has been technically revised.

However, **JIS H 3270 : 2018** 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 20 March 2026.

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

It should be noted that being in conformance with this Standard may come under the use of the patent rights and other rights held by the following:

| Company name                  | Address                                       | Patent number | Date of establishment | Title of patent  |
|-------------------------------|---|---------------|-----------------------|--|
| FUJII MANUFACTURING CO., LTD. | 1-14-6 Hon-issiki, Edogawa-ku, Tokyo          | 6742278       | 30 July 2020          | Lead-free free-cutting phosphor bronze rod wire, and manufacturing method of lead-free free-cutting phosphor bronze rod wire |
| Kurimoto, Ltd.                | 1-12-19 Kitahorie, Nishi-ku, Osaka-shi, Osaka |               |                       |  |

The holder/holders of this/these patent right/rights and other rights has/have indicated an intention of granting license to anyone under the nondiscriminatory and reasonable conditions, except to the other relevant holders of the patent rights and other rights related to this Standard who will not grant their licenses under the same conditions.

It should be noted that following this Standard does not always refer to granting a free license.

Some parts of this Standard may conflict with patent rights and other rights other than mentioned above. The relevant Minister and the Japanese Industrial Standards Committee are not responsible for identifying any of such patent rights and other rights.

The “patent rights and other rights” as mentioned here include patent right, published patent application or utility model right.

# Copper beryllium alloy, phosphor bronze and nickel silver rods, bars and wires

## 1 Scope

This Japanese Industrial Standard specifies requirements for the expanded copper beryllium alloy, phosphor bronze and nickel silver rods and bars having a round/regular hexagonal/rectangular section (hereafter referred to as bars) and wires having a round/regular hexagonal/square/rectangular section (hereafter referred to as wires).

## 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.

- 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 1060 *Methods for determination of cobalt in copper and copper alloys*
- JIS H 1062 *Methods for determination of zinc in copper and copper alloys*
- JIS H 1063 *Methods for determination of beryllium in copper alloys*
- JIS H 1070 *Copper and copper alloys — Determination of sulfur content*
- 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 2244-1 *Vickers hardness test — Part 1: Test method*
- JIS Z 2244-2 *Vickers hardness test — Part 2: Tables of hardness values*
- JIS Z 2245 *Rockwell hardness test — Test method*