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STANDARD

**4382-1**

Second edition  
1991-11-01

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**Plain bearings — Copper alloys —**

**Part 1:**

Cast copper alloys for solid and multilayer  
thick-walled plain bearings

*Paliers lisses — Alliages de cuivre —*

*Partie 1: Alliages de cuivre moulés pour paliers lisses à paroi épaisse,  
massifs et multicouches*



Reference number  
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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.

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.

International Standard ISO 4382-1 was prepared by Technical Committee ISO/TC 123, *Plain bearings*, Sub-Committee SC 2, *Materials and lubricants, their properties, characteristics, test methods and testing conditions*.

This second edition cancels and replaces the first edition (ISO 4382-1:1982), of which it constitutes a technical revision.

ISO 4382 consists of the following parts, under the general title *Plain bearings — Copper alloys*:

- *Part 1: Cast copper alloys for solid and multilayer thick-walled plain bearings*
- *Part 2: Wrought copper alloys for solid plain bearings*

Annexes A and B of this part of ISO 4382 are for information only.

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## Plain bearings — Copper alloys —

### Part 1:

## Cast copper alloys for solid and multilayer thick-walled plain bearings

### 1 Scope

This part of ISO 4382 specifies requirements for cast copper alloys for use in solid and multilayer thick-walled plain bearings. It gives a limited selection of alloys currently available for general purposes.

### 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 4382. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 4382 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 4383:1991, *Plain bearings — Multilayer materials for thin-walled plain bearings.*

ISO 4384-1:1982, *Plain bearings — Hardness testing of bearing metals — Part 1: Compound materials.*

ISO 4384-2:1982, *Plain bearings — Hardness testing of bearing metals — Part 2: Solid materials.*

ISO 6892:1984, *Metallic materials — Tensile testing.*

### 3 Requirements

If the purchaser's requirements necessitate limits for any element not specified, or limits different from those already specified, these should be agreed upon between supplier and purchaser.

### 3.1 Chemical composition

The chemical composition shall be within the limits specified in tables 1 and 2, where single figures denote maximum values.

### 3.2 Analysis

Methods of analysis for alloying elements, permissible additions, or impurities shall either be as specified in relevant International Standards or as mutually agreed between supplier, purchaser and any mutually acceptable arbitrator.

## 4 Material properties

### 4.1 General

The minimum tensile strength and elongation values quoted in tables 1 and 2 are included as properties which may assist designers. Brinell hardness is the mandatory quality control check. If tensile strength and elongation tests are required, this should be stated by the purchaser at the time of ordering.

For finished bearings Brinell hardness will normally be checked.