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Standards

Irish Standard  
I.S. EN ISO 4496:2017

# Metallic powders - Determination of acid-insoluble content in iron, copper, tin and bronze powders (ISO 4496:2017)

**I.S. EN ISO 4496:2017**

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## National Foreword

I.S. EN ISO 4496:2017 is the adopted Irish version of the European Document EN ISO 4496:2017, Metallic powders - Determination of acid-insoluble content in iron, copper, tin and bronze powders (ISO 4496:2017)

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EUROPEAN STANDARD

**EN ISO 4496**

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2017

ICS 77.160

Supersedes EN 24496:1993

English Version

## Metallic powders - Determination of acid-insoluble content in iron, copper, tin and bronze powders (ISO 4496:2017)

Poudres métalliques - Détermination de la teneur en insolubles dans les acides pour les poudres de fer, de cuivre, d'étain et de bronze (ISO 4496:2017)

Metallpulver - Bestimmung der säureunlöslichen Bestandteile in Eisen-, Kupfer-, Zinn- und Bronzepulvern (ISO 4496:2017)

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**EN ISO 4496:2017 (E)**

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## **European foreword**

This document (EN ISO 4496:2017) has been prepared by Technical Committee ISO/TC 119 "Powder metallurgy".

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by February 2018 and conflicting national standards shall be withdrawn at the latest by February 2018.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 24496:1993.

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### **Endorsement notice**

The text of ISO 4496:2017 has been approved by CEN as EN ISO 4496:2017 without any modification.

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# INTERNATIONAL STANDARD

# ISO 4496

Second edition  
2017-07

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## **Metallic powders — Determination of acid-insoluble content in iron, copper, tin and bronze powders**

*Poudres métalliques — Détermination de la teneur en insolubles dans  
les acides pour les poudres de fer, de cuivre, d'étain et de bronze*



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## ISO 4496:2017(E)

### 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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/ TC 119, *Powder metallurgy*, Subcommittee SC 2, *Sampling and testing methods for powders (including powders for hardmetals)*.

This second edition cancels and replaces the first edition (ISO 4496:1978), of which it constitutes a minor revision. The changes compared to the previous edition are as follows:

- “ashless grade (less than 0,01 % residual ash [1])” has been added in [6.3](#);
- general formatting of the structure.

# Metallic powders — Determination of acid-insoluble content in iron, copper, tin and bronze powders

## 1 Scope

This document specifies methods for determining, in iron, copper, tin and bronze powders, the approximate content of non-metallic materials which are insoluble in the ordinary mineral acids.

The insoluble matter referred to is generally considered to be acid-insoluble silica and silicates, carbides, alumina, clays or other refractory oxides which are either present in the raw material from which the powders are manufactured or introduced during the manufacturing process.

## 2 Normative references

There are no normative references in this document.

## 3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

## 4 Field of application

The methods are applicable to lubricant-free metallic powders of iron, copper, tin, alloy bronze and elemental mixtures of copper and tin.

## 5 Reagents

During the analysis, use only reagents of recognized analytical grade, and only distilled water or water of equivalent purity. See [Table 1](#) for the required reagents.

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