
**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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Contents

Page

Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Field of application	1
5 Reagents	1
6 Equipment	2
7 Sampling	2
7.1 Number of test portions.....	2
7.2 Mass of test portion.....	2
8 Procedure	3
8.1 Iron powder.....	3
8.2 Copper, tin and bronze powders.....	3
9 Expression of results	4
9.1 Calculation of acid-insoluble content.....	4
9.2 Precision.....	4
9.3 Permissible difference.....	4
9.4 Mean value.....	4
10 Test report	4
Bibliography	6

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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.

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).

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).

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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.

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.