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Welding consumables — Solid wires and rods for fusion welding of copper and copper alloys — Classification

Produits consommables pour le soudage — Fils pleins et baguettes pleines pour le soudage par fusion du cuivre et des alliages de cuivre — Classification

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: www.iso.org

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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).

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For an explanation of 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 www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 44, *Welding and allied processes*, Subcommittee SC 3, *Welding consumables*.

Any feedback, question or request for official interpretation related to any aspect of this document should be directed to the Secretariat of ISO/TC 44/SC 3 via your national standards body. A complete listing of these bodies can be found at www.iso.org/members.html. Official interpretations, where they exist, are available from this page: https://committee.iso.org/sites/tc44/home/interpretation.html

This second edition cancels and replaces the first edition (ISO 24373:2008), which has been technically revised. The main changes compared to the previous edition are as follows:

— a new alloy, CuSn6MnSi, has been added to Table 1;

— chemistries in Table 1 have been updated for a number of alloys;

— wording regarding Z options has been revised in footnote to Table 1;

— an example showing a Z option has been added;

— Clauses 7, 8 and 9 have been updated to reflect agreed text for all ISO/TC 44/SC 3 standards.

Introduction

For copper-welding consumables, there is no unique relationship between the product form (solid wire or rod) and the welding process used (e.g. gas-shielded metal arc welding, gas tungsten arc welding, plasma arc or other welding processes). For this reason, the solid wires or rods can be classified on the basis of any of the product forms and can be used, as appropriate, for more than one of the above welding processes.

This document was originally based on EN 14640:2005[1].

Welding consumables — Solid wires and rods for fusion welding of copper and copper alloys — Classification

1 Scope

This document specifies requirements for classification of solid wires and rods for fusion welding of copper and copper alloys. The classification of the solid wires and rods is based on their chemical composition.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 544, *Welding consumables — Technical delivery conditions for filler materials and fluxes — Type of product, dimensions, tolerances and markings*

ISO 14344, *Welding consumables — Procurement of filler materials and fluxes*

ISO 80000-1:2009, *Quantities and units — Part 1: General*

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:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

4 Classification

The classification is divided into two parts:

a) the first part indicates the product form, solid wires or rods (see 5.1);

b) the second part gives a numerical symbol indicating the chemical composition of the solid wire or rod (see Table 1).

5 Symbols

5.1 Symbol for the product form

The symbol for the solid wire and rod shall be S.

NOTE One product form may be used for more than one welding process.