BS EN ISO 6509-1:2014

BSI Standards Publication

Corrosion of metals and alloys — Determination of dezincification resistance of copper alloys with zinc

Part 1: Test method

National foreword

This British Standard is the UK implementation of EN ISO 6509-1:2014. Together with BS EN ISO 6509-2 it supersedes BS EN ISO 6509:1995 which will be withdrawn on the publication of BS EN ISO 6509-2.

The UK participation in its preparation was entrusted to Technical Committee ISE/NFE/8, Corrosion of metals and alloys.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Compliance with a British Standard cannot confer immunity from legal obligations.

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Corrosion of metals and alloys - Determination of dezincification resistance of copper alloys with zinc - Part 1: Test method (ISO 6509-1:2014)

Corrosion des métaux et alliages - Détermination de la résistance à la dézincification des alliages de cuivre avec le zinc - Partie 1: Méthode d'essai (ISO 6509-1:2014)

Korrosion von Metallen und Legierungen - Bestimmung der Entzinkungsbeständigkeit von Kupfer-Zink-Legierungen - Teil 1: Prüfverfahren (ISO 6509-1:2014)

This European Standard was approved by CEN on 7 May 2014.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (EN ISO 6509-1:2014) has been prepared by Technical Committee ISO/TC 156 “Corrosion of metals and alloys” in collaboration with Technical Committee CEN/TC 262 “Metallic and other inorganic coatings” the secretariat of which is held by BSI.

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of an identical text or by endorsement, at the latest by December 2014, and conflicting national standards shall be withdrawn at the latest by December 2014.

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

This document supersedes EN ISO 6509:1995.

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Endorsement notice

The text of ISO 6509-1:2014 has been approved by CEN as EN ISO 6509-1:2014 without any modification.

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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. www.iso.org/directives

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT), see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 156, *Corrosion of metals and alloys*.

This first edition of ISO 6509-1, together with ISO 6509-2, cancels and replaces ISO 6509:1981, which has been technically revised. The clause formerly concerning acceptance limits has been removed since it has been taken up in the new Part 2.

ISO 6509 consists of the following parts, under the general title *Corrosion of metals and alloys — Determination of dezincification resistance of copper alloys with zinc*:

— *Part 2: Acceptance criteria*[1)]

1) In preparation.

INTERNATIONAL STANDARD **ISO 6509-1:2014(E)**

Corrosion of metals and alloys — Determination of dezincification resistance of copper alloys with zinc —

Part 1: Test method

1 Scope

This part of ISO 6509 specifies a method for the determination of dezincification depth of copper alloys with zinc exposed to fresh, saline waters or drinking water. The method is intended for copper alloys with a mass fraction of zinc more than 15 %.

This part of ISO 6509 describes only the test methodology and does not set out criteria for acceptability of materials for a specific application. Acceptance criteria are described in ISO 6509-2.

NOTE The method may be used outside its scope for control or research purposes.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 8044, *Corrosion of metals and alloys — Basic terms and definitions*

3 Terms and definitions

For the purposes of this document the terms and definitions given in ISO 8044 apply.

4 Principle

Exposure of test specimens to copper (ll) chloride solution followed by microscopic examination.

5 Reagents and materials

5.1 Copper (ll) chloride, mass fraction 1 % solution, freshly prepared.

Dissolve 12,7 g of copper(II) chloride dihydrate ($CuCl_2 \cdot 2H_20$) in deionized water (5.2) and make up the volume to 1 000 ml.

5.2 Water, deionized with a conductivity not higher than 20 µS/cm at 25 °C ± 2 °C.

5.3 Non-conducting mounting material, such as phenolic resin for embedding the test specimens.

5.4 Appropriate solvent, for cleaning the test specimens.