Irish Standard
I.S. EN ISO 6509-1:2014

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

I.S. EN ISO 6509-1:2014

Incorporating amendments/corrigenda/National Annexes issued since publication:

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation — recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

This document replaces/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):

NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.

This document is based on:	*Published:*
EN ISO 6509-1:2014	2014-06-04

This document was published under the authority of the NSAI and comes into effect on:	ICS number:
2014-06-21	77.060
	NOTE: If blank see CEN/CENELEC cover page

NSAI
1 Swift Square,
Northwood, Santry
Dublin 9

T +353 1 807 3800
F +353 1 807 3838
E standards@nsai.ie
W NSAI.ie

Sales:
T +353 1 857 6730
F +353 1 857 6729
W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 6509-1

June 2014

ICS 77.060

Supersedes EN ISO 6509:1995

English Version

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.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

Page

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.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

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

This page is intentionally left blank

I.S. EN ISO 6509-1:2014

INTERNATIONAL STANDARD

ISO 6509-1

First edition
2014-06-01

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

Part 1: **Test method**

Corrosion des métaux et alliages — Détermination de la résistance à la dézincification des alliages de cuivre avec le zinc —

Partie 1: Méthode d'essai

Reference number
ISO 6509-1:2014(E)

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents

Page

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

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. 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 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.

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.