



SLOVENSKI STANDARD SIST EN ISO 27874:2008

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Metallic and other inorganic coatings - Electrodeposited gold and gold alloy coatings for electrical, electronic and engineering purposes - Specification and test methods (ISO 27874:2008)

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Metallische Überzüge - Galvanische Gold- und Goldlegierungsüberzüge für elektrische, elektronische und technische Zwecke - Anforderungen und Prüfverfahren (ISO 27874:2008)

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Revêtements métalliques et autres revêtements inorganiques - Dépôts électrolytiques d'or et d'alliages d'or pour usages électrique, électronique et industriels - Spécification et méthodes d'essai (ISO 27874:2008)

Ta slovenski standard je istoveten z: EN ISO 27874:2008

ICS:

25.220.40 Kovinske prevleke Metallic coatings

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 27874

September 2008

ICS 25.220.40

English Version

**Metallic and other inorganic coatings - Electrodeposited gold
and gold alloy coatings for electrical, electronic and engineering
purposes - Specification and test methods (ISO 27874:2008)**

Revêtements métalliques et autres revêtements
inorganiques - Dépôts électrolytiques d'or et d'alliages d'or
pour usages électrique, électronique et industriels -
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Metallische Überzüge - Galvanische Gold- und
Goldlegierungsüberzüge für elektrische, elektronische und
technische Zwecke - Anforderungen und Prüfverfahren
(ISO 27874:2008)

This European Standard was approved by CEN on 13 September 2008.

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 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 Management Centre has the same status as the official versions.

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



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

Management Centre: rue de Stassart, 36 B-1050 Brussels

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Foreword

This document (EN ISO 27874:2008) has been prepared by Technical Committee ISO/TC 107 "Metallic and other inorganic coatings" 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 March 2009, and conflicting national standards shall be withdrawn at the latest by March 2009.

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.

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Endorsement notice

The text of ISO 27874:2008 has been approved by CEN as a EN ISO 27874:2008 without any modification.

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INTERNATIONAL STANDARD

ISO
27874

First edition
2008-09-15

Metallic and other inorganic coatings — Electrodeposited gold and gold alloy coatings for electrical, electronic and engineering purposes — Specification and test methods

*Revêtements métalliques et autres revêtements inorganiques — Dépôts
électrolytiques d'or et d'alliages d'or pour usages électrique,
électronique et industriels — Spécification et méthodes d'essai*

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Reference number
ISO 27874:2008(E)

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ISO 27874:2008(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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 27874 was prepared by Technical Committee ISO/TC 107, *Metallic and other inorganic coatings*, Subcommittee SC 3, *Electrodeposited coatings and related finishes*.

This first edition of ISO 27874 cancels and replaces ISO 4523:1985, ISO 4524-1:1985, ISO 4524-4:1985 and ISO 4524-5:1985, of which it constitutes a technical revision.

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Introduction

The engineering uses of electrodeposited gold and gold alloy coatings have expanded with the growth of the electrical and electronic industries. Low voltages and currents, dry circuits and microwave frequencies require low-resistance interconnection systems, connectors and waveguides. Non-tarnishing, low-resistance gold coatings were the logical choice for connectors where the stability of contact surfaces was critical. The need to improve the wear resistance of gold coatings led to the development of new electroplating solutions containing controlled amounts of metallic and non-metallic additives that either changed the composition or altered the crystal structure of the coating. The special needs of the printed-circuit industry led to the development of acid gold electroplating solutions that contained no free cyanide, yielding coatings that are hard, bright and solderable. Formulations for high-speed electroplating up to current densities of 200 A/dm² were introduced for continuous strip, stripe or spot gold and gold alloy coatings.

The high cost of gold metal has led to the development of selective and thickness profile plating techniques to limit the use of the metal to the active areas only of the components, where the gold is required. Designers will therefore often specify the area requiring gold electroplating as well as the thickness profile, if required, by reference to suitably marked drawings.

With the introduction of many new gold electroplating formulations and the proliferation of engineering applications, the need for technical standards that specify the requirements of electrodeposited gold and gold alloy coatings, as well as the test methods to ensure that the specified requirements are met, is critical. Composition, appearance, hardness, thickness, purity, porosity, wear resistance, solderability, electrical contact resistance, infrared reflectivity and other properties must be controlled to produce high-quality gold and gold alloy coatings for engineering purposes.

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