



SLOVENSKI STANDARD

SIST EN ISO 2082:2009

01-april-2009

BUXca Yý U
SIST EN 12330:2000

Kovinske in druge anorganske prevleke - Galvanske prevleke kadmija z dodatno obdelavo na železu in jeklu (ISO 2082:2008)

Metallic and other inorganic coatings - Electroplated coatings of cadmium with supplementary treatments on iron or steel (ISO 2082:2008)

Metallische Überzüge - Galvanische Cadmiumüberzüge auf Eisenwerkstoffen mit zusätzlicher Behandlung (ISO 2082:2008)

Revêtements métalliques et autres revêtements inorganiques - Dépôts électrolytiques de cadmium avec traitements supplémentaires sur fer ou acier (ISO 2082:2008)

Ta slovenski standard je istoveten z: EN ISO 2082:2008

ICS:

25.220.40 Kovinske prevleke Metallic coatings

SIST EN ISO 2082:2009 en

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN ISO 2082:2009](#)

<https://standards.iteh.ai/catalog/standards/sist/39fe83dd-d439-4d74-b6a3-547c109e1492/sist-en-iso-2082-2009>

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 2082

December 2008

ICS 25.220.40

Supersedes EN 12330:2000

English Version

Metallic and other inorganic coatings - Electroplated coatings of cadmium with supplementary treatments on iron or steel (ISO 2082:2008)

Revêtements métalliques et autres revêtements inorganiques - Dépôts électrolytiques de cadmium avec traitements supplémentaires sur fer ou acier (ISO 2082:2008)

Metallische Überzüge - Galvanische Cadmiumüberzüge auf Eisenwerkstoffen mit zusätzlicher Behandlung (ISO 2082:2008)

This European Standard was approved by CEN on 19 December 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: Avenue Marnix 17, B-1000 Brussels

Contents	Page
Foreword.....	3
Annex ZA (informative) A–deviations.....	4

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN ISO 2082:2009](https://standards.iteh.ai/catalog/standards/sist/39fe83dd-d439-4d74-b6a3-547c109e1492/sist-en-iso-2082-2009)
<https://standards.iteh.ai/catalog/standards/sist/39fe83dd-d439-4d74-b6a3-547c109e1492/sist-en-iso-2082-2009>

Foreword

This document (EN ISO 2082:2008) 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 June 2009, and conflicting national standards shall be withdrawn at the latest by June 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.

This document supersedes EN 12330:2000.

WARNING — Because of regulations, the alteration of which is for the time being outside the competence of the CEN members, this European Standard contains an A-deviation as detailed in Annex ZA (informative).

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, 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 the United Kingdom.

SIST EN ISO 2082:2009

<https://standards.iteh.ai/catalog/standards/sist/29683dd-d439-4d74-b6a3-547c109e1492/sist-en-iso-2082-2009>

Endorsement notice

The text of ISO 2082:2008 has been approved by CEN as a EN ISO 2082:2008 without any modification.

Annex ZA (informative)

A–deviations

A-deviation: National deviation due to regulations, the alteration of which is for the time being outside the competence of the CEN/ CENELEC member.

This European Standard does not fall under any Directive of the EU. In the relevant CEN/CENELEC countries these A-deviations are valid instead of the provisions of the European Standard until they have been removed.

<u>Clause</u>	<u>Deviation</u>
General	Germany (Gefahrstoffverordnung; Chemikalien-Verbotsverordnung) In Germany, the Gefahrstoffverordnung and the Chemikalien-Verbotsverordnung are applicable and cadmium electroplating is permitted only for special purposes, for which special standards exist.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN ISO 2082:2009](https://standards.iteh.ai/catalog/standards/sist/39fe83dd-d439-4d74-b6a3-547c109e1492/sist-en-iso-2082-2009)

<https://standards.iteh.ai/catalog/standards/sist/39fe83dd-d439-4d74-b6a3-547c109e1492/sist-en-iso-2082-2009>

INTERNATIONAL STANDARD

ISO 2082

Third edition
2008-12-15

Metallic and other inorganic coatings — Electroplated coatings of cadmium with supplementary treatments on iron or steel

*Revêtements métalliques et autres revêtements inorganiques — Dépôts
électrolytiques de cadmium avec traitements supplémentaires sur fer ou*

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN ISO 2082:2009](https://standards.iteh.ai/catalog/standards/sist/39fe83dd-d439-4d74-b6a3-547c109e1492/sist-en-iso-2082-2009)

[https://standards.iteh.ai/catalog/standards/sist/39fe83dd-d439-4d74-b6a3-
547c109e1492/sist-en-iso-2082-2009](https://standards.iteh.ai/catalog/standards/sist/39fe83dd-d439-4d74-b6a3-547c109e1492/sist-en-iso-2082-2009)



Reference number
ISO 2082:2008(E)

© ISO 2008

ISO 2082:2008(E)

PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN ISO 2082:2009](https://standards.iteh.ai/catalog/standards/sist/39fe83dd-d439-4d74-b6a3-547c109e1492/sist-en-iso-2082-2009)

<https://standards.iteh.ai/catalog/standards/sist/39fe83dd-d439-4d74-b6a3-547c109e1492/sist-en-iso-2082-2009>

**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2008

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

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.....	iv
Introduction	v
1 Scope	1
2 Normative references	2
3 Terms, definitions, abbreviated terms and symbols.....	3
3.1 Terms and definitions.....	3
3.2 Abbreviated terms	3
3.3 Symbols	3
4 Information to be supplied by the purchaser to the electroplater.....	3
4.1 Essential information	3
4.2 Additional information.....	4
5 Designation	4
5.1 General.....	4
5.2 Designation specification	4
5.3 Designation of heat treatment requirements.....	5
5.4 Examples	5
6 Requirements	5
6.1 Appearance	5
6.2 Thickness	6
6.3 Conversion coatings and other supplementary treatments.....	6
6.4 Adhesion of cadmium and chromate coatings.....	6
6.5 Accelerated corrosion testing.....	7
6.6 Stress relief heat treatment before cleaning and metal deposition	8
6.7 Hydrogen-embrittlement-relief heat treatment after electroplating.....	8
7 Sampling.....	9
Annex A (normative) Designation of chromate conversion coatings and other supplementary treatments	10
Annex B (normative) Measurement of average thickness of coating on small articles	12
Annex C (informative) Additional information on corrosion resistance, rinsing and drying, processing parts in bulk and dyeing of chromate conversion coatings	13
Bibliography	15

ISO 2082:2008(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 2082 was prepared by Technical Committee ISO/TC 107, *Metallic and other inorganic coatings*, Subcommittee SC 3, *Electrodeposited coatings and related finishes*.

This third edition cancels and replaces the second edition (ISO 2082:1986), which has been technically revised.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN ISO 2082:2009
<https://standards.iteh.ai/catalog/standards/sist/39fe83dd-d439-4d74-b6a3-547c109e1492/sist-en-iso-2082-2009>

Introduction

Electrodeposits of cadmium are used to protect iron and steel from corrosion. Cadmium is anodic and corrodes sacrificially, thus protecting ferrous basis metals even when exposed through pores or pits in the cadmium. Electrodeposited cadmium coatings have traditionally been applied to iron or steel from alkaline cyanide solutions, but in recent years, environmental concerns and regulations have led to increased use of acid sulphate, neutral chloride and acid fluoborate cadmium solutions.

Because the appearance and serviceability of electroplated cadmium coatings are influenced by the surface condition of the basis metal, agreement should be reached between the interested parties that the surface of the basis metal is satisfactory for electroplating.

Cadmium is highly toxic and health, safety and environmental concerns are eliminating its non-essential uses. There remain, nevertheless, critical applications, often aerospace-related, where the unique properties of electrodeposited cadmium coatings, for example, their corrosion resistance, intrinsic lubricity, ductility, electrical conductivity and low contact resistance, make continued use of cadmium coatings necessary.

The corrosion resistance of electroplated cadmium coatings and their tendency to tarnish when handled can be improved by applying chromate conversion and other supplementary coatings.

Chemical conversion coatings that do not contain hexavalent chromium are commercially available and their use is becoming more and more popular. The appearance of these substitutes may be different from those produced with hexavalent chromium. Other conversion coatings that are chromium-free are also available. Substitutes are required to satisfy the corrosion requirements given in this International Standard.

[SIST EN ISO 2082:2009](https://standards.iteh.ai/catalog/standards/sist/39fe83dd-d439-4d74-b6a3-547c109e1492/sist-en-iso-2082-2009)

<https://standards.iteh.ai/catalog/standards/sist/39fe83dd-d439-4d74-b6a3-547c109e1492/sist-en-iso-2082-2009>