



SLOVENSKI STANDARD SIST EN ISO 2082:2017

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Nadomešča:
SIST EN ISO 2082:2009

Kovinske in druge anorganske prevleke - Galvanske prevleke kadmija z dodatno obdelavo na železu in jeklu (ISO 2082:2017)

Metallic and other inorganic coatings - Electroplated coatings of cadmium with supplementary treatments on iron or steel (ISO 2082:2017)

Metallische und andere anorganische Überzüge - Galvanische Cadmiumüberzüge auf Eisenwerkstoffen mit zusätzlicher Behandlung (ISO 2082:2017)

Revêtements métalliques et autres revêtements inorganiques - Dépôts électrolytiques de cadmium avec traitements supplémentaires sur fer ou acier (ISO 2082:2017)

Ta slovenski standard je istoveten z: EN ISO 2082:2017

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25.220.40 Kovinske prevleke Metallic coatings

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Metallic and other inorganic coatings - Electroplated coatings of cadmium with supplementary treatments on iron or steel (ISO 2082:2017)

Revêtements métalliques et autres revêtements inorganiques - Dépôts électrolytiques de cadmium avec traitements supplémentaires sur fer ou acier (ISO 2082:2017)

Metallische und andere anorganische Überzüge - Galvanische Cadmiumüberzüge auf Eisenwerkstoffen mit zusätzlicher Behandlung (ISO 2082:2017)

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European foreword

This document (EN ISO 2082:2017) 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, including for corrosion protection and corrosion testing of metals and alloys” 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of an identical text or by endorsement, at the latest by February 2018, and conflicting national standards shall be withdrawn at the latest by February 2018.

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INTERNATIONAL
STANDARD

ISO
2082

Fourth edition
2017-07

**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 acier*

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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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This document was prepared by the European Committee for Standardization (CEN) Technical Committee CEN/TC 262, *Metallic and other inorganic coatings, including for corrosion protection and corrosion testing of metals and alloys*, in collaboration with ISO Technical Committee TC 107, *Metallic and other inorganic coatings*, Subcommittee SC 3, *Electrodeposited coatings and related finishes*, in accordance with the agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This fourth edition cancels and replaces the third edition (ISO 2082:2008), which has been technically revised.

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 sulfate, 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.

Although concerns have been raised about the use of cadmium due to safety and environmental effects, there are 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. Due to the REACH Regulations, however, the use of hexavalent chromium compounds will be banned in Europe from September 2017 except where specifically authorized. Other conversion coatings that are chromium-free are also available. Substitutes are required to satisfy the corrosion requirements given in this document.

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