

**SLOVENSKI STANDARD**  
**SIST EN ISO 14713-3:2010****01-marec-2010****BUXca Yý U**  
**SIST EN ISO 14713:1999**

7 ]b\_cj Y'dfYj`Y\_Y!'Ga Yfb]W' ]b'df]dcfc ]UnUnUý ]fc`yY`Ynb] ]b`Y`\_Yb]`  
\_cbglfi \_W^dfch]`\_cfcn]!'" "XY. üYfUX]fUb`Y`fGC`% +%!' .&\$\$- Ł

Zinc coatings - Guidelines and recommendations for the protection against corrosion of iron and steel in structures - Part 3: Sherardizing (ISO 14713-3:2009)

Zinküberzüge - Leitfäden und Empfehlungen zum Schutz von Eisen- und Stahlkonstruktionen vor Korrosion - Teil 3: Sherardisieren (ISO 14713-3:2009)  
(standards.iteh.ai)

Revêtements de zinc - Lignes directrices et recommandations pour la protection contre la corrosion du fer et de l'acier dans les constructions - Partie 3: Shérardisation (ISO 14713-3:2009)  
<http://standards.iteh.ai/catalog/standards/sist/9a6f58d666fc/sist-en-iso-14713-3-2010>

**Ta slovenski standard je istoveten z: EN ISO 14713-3:2009**

**ICS:**

25.220.40	Kovinske prevleke	Metallic coatings
91.080.10	Kovinske konstrukcije	Metal structures

**SIST EN ISO 14713-3:2010** en

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

[SIST EN ISO 14713-3:2010](#)

<https://standards.iteh.ai/catalog/standards/sist/ab600746-e74a-4b81-a8bf-9a6f58d666fc/sist-en-iso-14713-3-2010>

EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN ISO 14713-3**

December 2009

ICS 25.220.40; 91.080.10

English Version

**Zinc coatings - Guidelines and recommendations for the  
protection against corrosion of iron and steel in structures - Part  
3: Sherardizing (ISO 14713-3:2009)**

Revêtements de zinc - Lignes directrices et  
recommandations pour la protection contre la corrosion du  
fer et de l'acier dans les constructions - Partie 3:  
Shérardisation (ISO 14713-3:2009)

Zinküberzüge - Leitfäden und Empfehlungen zum Schutz  
von Eisen- und Stahlkonstruktionen vor Korrosion - Teil 3:  
Sherardisieren (ISO 14713-3:2009)

This European Standard was approved by CEN on 18 November 2009.

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

**iTeh STANDARD PREVIEW  
(standards.iteh.ai)**

[SIST EN ISO 14713-3:2010](https://standards.iteh.ai/catalog/standards/sist/ab600746-e74a-4b81-a8bf-9a6f58d666fc/sist-en-iso-14713-3-2010)

<https://standards.iteh.ai/catalog/standards/sist/ab600746-e74a-4b81-a8bf-9a6f58d666fc/sist-en-iso-14713-3-2010>

## Foreword

This document (EN ISO 14713-3:2009) 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 2010, and conflicting national standards shall be withdrawn at the latest by June 2010.

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.

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.

## iTeh STANDARD PREVIEW Endorsement notice (standards.iteh.ai)

The text of ISO 14713-3:2009 has been approved by CEN as a EN ISO 14713-3:2009 without any modification.

[SIST EN ISO 14713-3:2010](https://standards.iteh.ai/catalog/standards/sist/ab600746-e74a-4b81-a8bf-9a6f58d666fc/sist-en-iso-14713-3-2010)

<https://standards.iteh.ai/catalog/standards/sist/ab600746-e74a-4b81-a8bf-9a6f58d666fc/sist-en-iso-14713-3-2010>

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

[SIST EN ISO 14713-3:2010](#)

<https://standards.iteh.ai/catalog/standards/sist/ab600746-e74a-4b81-a8bf-9a6f58d666fc/sist-en-iso-14713-3-2010>

INTERNATIONAL  
STANDARD

ISO  
14713-3

First edition  
2009-12-15

---

---

**Zinc coatings — Guidelines and  
recommendations for the protection  
against corrosion of iron and steel in  
structures —**

**Part 3:  
Sherardizing**

iTeh STANDARD PREVIEW

*Revêtements de zinc — Lignes directrices et recommandations pour la  
protection contre la corrosion du fer et de l'acier dans les  
constructions —*

SIST EN ISO 14713-3:2010  
Partie 3: Shérardisation

<https://standards.iteh.ai/catalog/standards/sist/ab600746-e74a-4b81-a8bf-9a6f58d666fc/sist-en-iso-14713-3-2010>



Reference number  
ISO 14713-3:2009(E)

© ISO 2009

**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 14713-3:2010](https://standards.iteh.ai/catalog/standards/sist/ab600746-e74a-4b81-a8bf-9a6f58d666fc/sist-en-iso-14713-3-2010)

<https://standards.iteh.ai/catalog/standards/sist/ab600746-e74a-4b81-a8bf-9a6f58d666fc/sist-en-iso-14713-3-2010>

**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2009

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](mailto:copyright@iso.org)  
Web [www.iso.org](http://www.iso.org)

Published in Switzerland



## Contents

Page

Foreword .....	iv
Introduction.....	v
1 Scope .....	1
2 Normative references .....	1
3 Terms and definitions .....	2
4 Design for sherardizing .....	2
4.1 General .....	2
4.2 Surface preparation.....	2
4.3 Design considerations .....	3
4.4 Clearances of threaded components .....	3
5 Storage and transport .....	4
5.1 General .....	4
5.2 Recommendations for storage and transport .....	4
6 Effects of article condition on quality of sherardizing .....	4
6.1 Composition.....	4
6.2 Surface condition .....	5
6.3 Influence of steel surface roughness on the sherardized coating thickness .....	5
6.4 Internal stresses in the base material .....	5
6.5 Large objects and thick steels .....	6
7 Effect of sherardizing process on the article .....	6
7.1 Processing circumstances.....	6
7.2 Coating properties influenced by the sherardizing process .....	7
8 After-treatments.....	7
Bibliography.....	8

**ISO 14713-3:2009(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 14713-3 was prepared by Technical Committee ISO/TC 107, *Metallic and other inorganic coatings*, Subcommittee SC 4, *Hot dip coatings (galvanized, etc.)*.

This first edition, together with ISO 14713-1 and ISO 14713-2, cancels and replaces ISO 14713:1999, which has been technically revised.

ISO 14713 consists of the following parts, under the general title *Zinc coatings — Guidelines and recommendations for the protection against corrosion of iron and steel in structures*:

- *Part 1: General principles of design and corrosion resistance*
- *Part 2: Hot dip galvanizing*
- *Part 3: Sherardizing*

## Introduction

Sherardizing is a thermal diffusion process in which articles are heated in the presence of a sherardizing mixture consisting of zinc dust with or without an inert material.

The process is carried out in a slowly rotating closed container at temperatures ranging from about 300 °C to 500 °C. The normal processing temperature is below the melting point of zinc (419 °C).

During the process, zinc/iron alloys are built up on the surface of the ferrous articles. A coating thickness of 10 µm to 75 µm (and higher if required) can be achieved. The coating thickness is accurately controlled by the amount of zinc dust, the processing time and temperature. The coating closely follows the contours of the basis material, and uniform coatings are produced on articles, including those of irregular shape.

After sherardizing, the containers are cooled down. A screening process separates the sherardized articles from the unused sherardizing mixture. The articles, with the zinc/iron-alloyed layer, are normally post-treated by phosphating, chromating or another suitable passivation process (conversion coating) resulting in a dust free and clean passivated surface.

Most steel and iron articles can be sherardized.

## iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN ISO 14713-3:2010](https://standards.iteh.ai/catalog/standards/sist/ab600746-e74a-4b81-a8bf-9a6f58d666fc/sist-en-iso-14713-3-2010)

<https://standards.iteh.ai/catalog/standards/sist/ab600746-e74a-4b81-a8bf-9a6f58d666fc/sist-en-iso-14713-3-2010>