

This document is a preview generated by EVS

Steel for the reinforcement of concrete - Galvanized reinforcing steel - Part 2: Galvanized reinforcing steel products

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN 10348-2:2018 sisaldab Euroopa standardi EN 10348-2:2018 ingliskeelset teksti.	This Estonian standard EVS-EN 10348-2:2018 consists of the English text of the European standard EN 10348-2:2018.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 05.12.2018.	Date of Availability of the European standard is 05.12.2018.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile [standardiosakond@evs.ee](mailto:standardiosakond@evs.ee).

ICS 77.140.15

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega:

Koduleht [www.evs.ee](http://www.evs.ee); telefon 605 5050; e-post [info@evs.ee](mailto:info@evs.ee)

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:

Homepage [www.evs.ee](http://www.evs.ee); phone +372 605 5050; e-mail [info@evs.ee](mailto:info@evs.ee)

ICS 77.140.15

English Version

## Steel for the reinforcement of concrete - Galvanized reinforcing steel - Part 2: Galvanized reinforcing steel products

Aciers pour béton armé - Aciers pour béton armé galvanisés - Partie 2 : Produits en acier galvanisés pour l'armature du béton

Stahl für die Bewehrung von Beton - Verzinkter Betonstahl - Teil 2: Verzinkte Bewehrungsstahlerzeugnisse

This European Standard was approved by CEN on 9 November 2018.

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, Serbia, 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: Rue de la Science 23, B-1040 Brussels

## Contents

Page

European foreword.....	3
<b>1 Scope.....</b>	<b>3</b>
<b>2 Normative references.....</b>	<b>4</b>
<b>3 Terms and definitions.....</b>	<b>4</b>
<b>4 Symbols.....</b>	<b>5</b>
<b>5 Materials.....</b>	<b>6</b>
5.1 Reinforcing steel.....	6
5.2 Zinc melt.....	7
5.3 Repair material.....	7
<b>6 Designation.....</b>	<b>7</b>
<b>7 Information to be supplied at the time of enquiry and order.....</b>	<b>7</b>
<b>8 Galvanizing.....</b>	<b>7</b>
8.1 Coating application.....	7
8.2 Renovation.....	7
<b>9 Performance characteristics.....</b>	<b>8</b>
9.1 Steel mechanical properties.....	8
9.2 Dimensions, mass per metre and tolerances.....	8
9.3 Bond strength and surface geometry of the galvanized rebar.....	8
9.4 Durability.....	8
9.5 Finish and appearance.....	9
<b>10 Sampling, testing and evaluation of test result.....</b>	<b>9</b>
<b>10.1 Sampling and testing.....</b>	<b>9</b>
10.1.1 Test unit.....	9
10.1.2 Coating thickness.....	9
10.1.3 Rib height and indentation depth.....	9
<b>10.2 Evaluation of test results.....</b>	<b>9</b>
10.2.1 Rib height and indentation depth.....	9
10.2.2 Galvanized coating.....	9
10.2.3 Retests.....	10
<b>11 Test methods.....</b>	<b>10</b>
11.1 Rib height and indentation depth.....	10
11.2 Coating characteristics.....	10
11.2.1 Magnetic coating thickness measurement method.....	10
11.2.2 Gravimetric test method.....	11
11.2.3 Galvanized coating uniformity.....	11
<b>12 Labelling, packaging, handling, storage, transport.....</b>	<b>12</b>

## European foreword

This document (EN 10348-2:2018) has been prepared by Technical Committee ECISS/TC 104 “Concrete reinforcing and prestressing steels”, the secretariat of which is held by DIN.

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 2019 and conflicting national standards shall be withdrawn at the latest by June 2019.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN 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, 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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

## 1 Scope

This document specifies requirements for hot-dip galvanized reinforcing steel in the form of products according to EN 10080 and subjected to further processing, e.g. bent bars, stirrups, products straightened from coils, products cut from bars, welded structures (other than welded fabric or lattice girders according to EN 10348, Part 1) and any other components fabricated for use in the reinforcement of concrete.

This document does not apply to hot dip galvanized reinforcement for pre-stressing or components of these reinforcements.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 10080, *Steel for the reinforcement of concrete - Weldable reinforcing steel - General*

EN ISO 1460, *Metallic coatings - Hot dip galvanized coatings on ferrous materials - Gravimetric determination of the mass per unit area (ISO 1460)*

EN ISO 1461:2009, *Hot dip galvanized coatings on fabricated iron and steel articles - Specifications and test methods (ISO 1461:2009)*

EN ISO 2178, *Non-magnetic coatings on magnetic substrates - Measurement of coating thickness - Magnetic method (ISO 2178)*

EN ISO 14713-2, *Zinc coatings - Guidelines and recommendations for the protection against corrosion of iron and steel in structures - Part 2: Hot dip galvanizing (ISO 14713-2)*

EN ISO 15630-1, *Steel for the reinforcement and prestressing of concrete - Test methods - Part 1: Reinforcing bars, wire rod and wire (ISO 15630-1)*

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

### 3.1

#### **hot-dip galvanizing**

formation of a coating of zinc and/or zinc iron alloys on iron and steel products by dipping prepared steel in a zinc melt

### 3.2

#### **galvanized reinforcing steel products**

reinforcing steel products which has been hot-dip galvanized before or after working operations e.g. cutting, welding, bending, etc