



# SLOVENSKI STANDARD SIST EN ISO 3506-4:2011

01-junij-2011

Nadomešča:

SIST EN ISO 3506-4:2004

---

## Mehanske lastnosti veznih elementov iz nerjavnega jekla - 4. del: Pločevinski vijaki (ISO 3506-4:2009)

Mechanical properties of corrosion-resistant stainless steel fasteners - Part 4: Tapping screws (ISO 3506-4:2009)

Mechanische Eigenschaften von Verbindungselementen aus nichtrostenden Stählen - Teil 4: Blechsrauben (ISO 3506-4:2009)

Caractéristiques mécaniques des éléments de fixation en acier inoxydable résistant à la corrosion - Partie 4: Vis à tôle (ISO 3506-4:2009)

[SIST EN ISO 3506-4:2011](https://standards.iteh.ai/catalog/standards/sist/4c92f65d-8921b898-85e3-464-2011)

[https://standards.iteh.ai/catalog/standards/sist/4c92f65d-](https://standards.iteh.ai/catalog/standards/sist/4c92f65d-8921b898-85e3-464-2011)

**Ta slovenski standard je istoveten z: EN ISO 3506-4:2009**  
2011

---

### ICS:

21.060.10 Sorniki, vijaki, stebelni vijaki Bolts, screws, studs

77.140.20 Visokokakovostna jekla Stainless steels

SIST EN ISO 3506-4:2011

en,fr,de

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

SIST EN ISO 3506-4:2011

<https://standards.iteh.ai/catalog/standards/sist/4c92f65d-8fd6-443d-a5db-98921b957186/sist-en-iso-3506-4-2011>

EUROPEAN STANDARD

EN ISO 3506-4

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2009

ICS 21.060.10

Supersedes EN ISO 3506-4:2003

English Version

## Mechanical properties of corrosion-resistant stainless steel fasteners - Part 4: Tapping screws (ISO 3506-4:2009)

Caractéristiques mécaniques des éléments de fixation en acier inoxydable résistant à la corrosion - Partie 4: Vis à tôle (ISO 3506-4:2009)

Mechanische Eigenschaften von Verbindungselementen aus nichtrostenden Stählen - Teil 4: Blechschrauben (ISO 3506-4:2009)

This European Standard was approved by CEN on 24 October 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.

SIST EN ISO 3506-4:2011

<https://standards.iteh.ai/catalog/standards/sist/4c92f65d-8fd6-443d-a5db-98921b957186/sist-en-iso-3506-4-2011>



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

Management Centre: Avenue Marnix 17, B-1000 Brussels

<b>Contents</b>	<b>Page</b>
Foreword.....	<b>3</b>

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

[SIST EN ISO 3506-4:2011](https://standards.iteh.ai/catalog/standards/sist/4c92f65d-8fd6-443d-a5db-98921b957186/sist-en-iso-3506-4-2011)  
<https://standards.iteh.ai/catalog/standards/sist/4c92f65d-8fd6-443d-a5db-98921b957186/sist-en-iso-3506-4-2011>

## Foreword

This document (EN ISO 3506-4:2009) has been prepared by Technical Committee ISO/TC 2 "Fasteners" in collaboration with Technical Committee CEN/TC 185 "Fasteners", 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 May 2010, and conflicting national standards shall be withdrawn at the latest by May 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.

This document supersedes EN ISO 3506-4:2003.

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

The text of ISO 3506-4:2009 has been approved by CEN as a EN ISO 3506-4:2009 without any modification.

[SIST EN ISO 3506-4:2011](https://standards.iteh.ai/catalog/standards/sist/4c92f65d-8fd6-443d-a5db-98921b957186/sist-en-iso-3506-4-2011)

<https://standards.iteh.ai/catalog/standards/sist/4c92f65d-8fd6-443d-a5db-98921b957186/sist-en-iso-3506-4-2011>

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

SIST EN ISO 3506-4:2011

<https://standards.iteh.ai/catalog/standards/sist/4c92f65d-8fd6-443d-a5db-98921b957186/sist-en-iso-3506-4-2011>

INTERNATIONAL  
STANDARD

ISO  
3506-4

Second edition  
2009-11-15

---

---

**Mechanical properties of corrosion-  
resistant stainless steel fasteners —**

Part 4:  
**Tapping screws**

**iTeh STANDARD**  
*Caractéristiques mécaniques des éléments de fixation en acier  
inoxydable résistant à la corrosion —  
Partie 4: Vis à tôle*

**(standards.iteh.ai)**

SIST EN ISO 3506-4:2011

[https://standards.iteh.ai/catalog/standards/sist/4c92f65d-  
8fd6-443d-a5db-98921b957186/sist-en-iso-3506-4-  
2011](https://standards.iteh.ai/catalog/standards/sist/4c92f65d-8fd6-443d-a5db-98921b957186/sist-en-iso-3506-4-2011)



Reference number  
ISO 3506-4:2009(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 3506-4:2011

<https://standards.iteh.ai/catalog/standards/sist/4c92f65d-8fd6-443d-a5db-98921b957186/sist-en-iso-3506-4-2011>

**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
<b>1 Scope .....</b>	<b>1</b>
<b>2 Normative references .....</b>	<b>1</b>
<b>3 Designation, marking and finish .....</b>	<b>2</b>
3.1 Designation .....	2
3.2 Marking .....	3
3.3 Finish .....	4
<b>4 Chemical composition .....</b>	<b>4</b>
<b>5 Mechanical properties.....</b>	<b>5</b>
5.1 General .....	5
5.2 Surface hardness .....	5
5.3 Core hardness .....	6
5.4 Torsional strength .....	6
5.5 Thread forming capability.....	6
<b>6 Test methods .....</b>	<b>6</b>
6.1 Surface hardness test.....	6
6.2 Core hardness test .....	6
6.3 Torsional strength test.....	6
6.4 Drive test .....	8
<b>Annex A (normative) Description of the groups and grades of stainless steels .....</b>	<b>9</b>
<b>Annex B (informative) Stainless steel for cold heading and extruding .....</b>	<b>12</b>
<b>Annex C (informative) Austenitic stainless steels with particular resistance to chloride induced stress corrosion .....</b>	<b>14</b>
<b>Annex D (informative) Time-temperature diagram of intergranular corrosion in austenitic stainless steels, grade A2 (18/8 steels).....</b>	<b>15</b>
<b>Annex E (informative) Magnetic properties for austenitic stainless steels .....</b>	<b>16</b>
<b>Bibliography.....</b>	<b>17</b>

## ISO 3506-4:2009(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 3506-4 was prepared by Technical Committee ISO/TC 2, *Fasteners*, Subcommittee SC 1, *Mechanical properties of fasteners*.

This second edition cancels and replaces the first edition (ISO 3506-4:2003), which has been technically revised.

ISO 3506 consists of the following parts, under the general title *Mechanical properties of corrosion-resistant stainless steel fasteners*:

- *Part 1: Bolts, screws and studs*
- *Part 2: Nuts*
- *Part 3: Set screws and similar fasteners not under tensile stress*
- *Part 4: Tapping screws*

[SIST EN ISO 3506-4:2011](https://standards.iteh.ai/catalog/standards/sist/4c92f65d-8fd6-443d-a5db-98921b957186/sist-en-iso-3506-4-2011)

<https://standards.iteh.ai/catalog/standards/sist/4c92f65d-8fd6-443d-a5db-98921b957186/sist-en-iso-3506-4-2011>

## Introduction

In the preparation of this part of ISO 3506, special attention has been given to the fundamentally different property characteristics of the stainless steel fastener grades compared with those of carbon steel and low-alloy steel fasteners. Ferritic and austenitic stainless steels are strengthened only by cold working and consequently, the components do not have as homogeneous local material properties as hardened and tempered parts. These special features have been recognized in the elaboration of the hardness classes and the test procedures for mechanical properties.

The primary objective of this part of ISO 3506 is to ensure that corrosion-resistant austenitic, martensitic and ferritic stainless steel tapping screws will form mating threads in materials such as aluminium into which they are normally driven without deforming their own thread and without breaking during assembly or service. Selection of the steel group is based on the intended application.

# iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN ISO 3506-4:2011](https://standards.iteh.ai/catalog/standards/sist/4c92f65d-8fd6-443d-a5db-98921b957186/sist-en-iso-3506-4-2011)

<https://standards.iteh.ai/catalog/standards/sist/4c92f65d-8fd6-443d-a5db-98921b957186/sist-en-iso-3506-4-2011>