SLOVENSKI STANDARD
SIST EN ISO 3506-2:2020

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Nadomešča:
SIST EN ISO 3506-2:2011

Vezni elementi - Mehanske lastnosti veznih elementov iz nerjavnega jekla - 2. del: Matice z določenimi razredi in razredi trdnosti (ISO 3506-2:2020)

Fasteners - Mechanical properties of corrosion-resistant stainless steel fasteners - Part 2: Nuts with specified grades and property classes (ISO 3506-2:2020)

Mechanische Verbindungselemente - Mechanische Eigenschaften von Verbindungselementen aus korrosionsbeständigen nichtrostenden Stählen - Teil 2: Muttern mit festgelegten Stahlsorten und Festigkeitsklassen (ISO 3506-2:2020)

Fixations - Caractéristiques mécaniques des fixations en acier inoxydable résistant à la corrosion - Partie 2: Écrous de grades et classes de qualité spécifiés (ISO 3506-2:2020)

Ta slovenski standard je istoveten z: **EN ISO 3506-2:2020**

ICS:

21.060.20	Matice	Nuts
77.140.20	Visokokakovostna jekla	Stainless steels

SIST EN ISO 3506-2:2020 **en,fr,de**

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 3506-2

April 2020

ICS 21.060.20

Supersedes EN ISO 3506-2:2009

English Version

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This European Standard was approved by CEN on 28 March 2020.

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.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN ISO 3506-2:2020) 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 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 October 2020, and conflicting national standards shall be withdrawn at the latest by October 2020.

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.

This document supersedes EN ISO 3506-2:2009.

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Endorsement notice

The text of ISO 3506-2:2020 has been approved by CEN as EN ISO 3506-2:2020 without any modification.

INTERNATIONAL STANDARD

ISO 3506-2

Third edition
2020-04

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

Part 2: Nuts with specified grades and property classes

Fixations — Caractéristiques mécaniques des fixations en acier inoxydable résistant à la corrosion —
Partie 2: Écrous de grades et classes de qualité spécifiés

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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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Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 2, *Fasteners*.

This third edition cancels and replaces the second edition (ISO 3506-2:2009) which has been technically revised.

The main changes compared to the previous edition are as follows:

— annexes common to several parts of the ISO 3506 series have been withdrawn from this document and are now included in a new document (ISO 3506-6);

— duplex (austenitic-ferritic) stainless steels for property classes 70, 80 and 100 have been added (see Figure 1);

— property class 100 for austenitic stainless steel grades as well as grade A8 have been added (see Figure 1);

— information for nut styles (see 5.1) has been added;

— design of stainless steel bolt and nut assemblies (see Clause 6), and design principles of stainless steel nuts (see Annex A) have been added;

— finish (see 7.3) has been improved;

— calculated proof load values (see Tables 5 to 8) and rounding rules have been added;

— requirements and guidance for inspection procedures (see Clause 9) have been added;

— thread dimensions of the test mandrel for proof load (see Annex B) have been added;

— operational temperature ranges (see Clause 1) have been clarified;

— test methods for proof load and hardness have been improved (see Clause 10);

— nut marking and labelling especially for thin nuts with reduced loadability (see Clause 11) have been added;

— structure and content of this document have been brought in line with ISO 898-2.

A list of all parts in the ISO 3506 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

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

— *Part 1: Bolts, screws and studs with specified grades and property classes*

— *Part 2: Nuts with specified grades and property classes*

— *Part 3*[1]*: Set screws and similar fasteners not under tensile stress*

— *Part 4*[1]*: Tapping screws*

— *Part 5*[2]*:Special fasteners (also including fasteners from nickel alloys) for high temperature applications*

— *Part 6: General rules for the selection of stainless steels and nickel alloys for fasteners.*

The properties of stainless steel fasteners result from the chemical composition of the material (especially corrosion resistance) and from the mechanical properties due to the manufacturing processes. Ferritic, austenitic and duplex (austenitic-ferritic) stainless steel fasteners are generally manufactured by cold working; they consequently do not have homogeneous local material properties when compared to quenched and tempered fasteners.

Austenitic-ferritic stainless steels referred to as duplex stainless steels were originally invented in the 1930s. Standard duplex grades used today have been developed since the 1980s. Fasteners made of duplex stainless steels have been long established in a range of applications. This document was revised to reflect their standardization.

All duplex stainless steel grades show improved resistance to stress corrosion cracking compared to the commonly used A1 to A5 austenitic grades. Most duplex grades also show higher levels of pitting corrosion resistance, where D2 matches at least A2 and where D4 matches at least A4.

Complementary detailed explanations about definitions of stainless steel grades and properties are specified in ISO 3506-6.

1) It is intended to revise ISO 3506-3 and ISO 3506-4 in the future in order to include the reference to ISO 3506-6.

2) Under preparation.