

DIN EN ISO 3506-1



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**Fasteners –
Mechanical properties of corrosion-resistant stainless steel fasteners –
Part 1: Bolts, screws and studs with specified grades and property classes
(ISO 3506-1:2020);
English version EN ISO 3506-1:2020,
English translation of DIN EN ISO 3506-1:2020-08**

Mechanische Verbindungselemente –
Mechanische Eigenschaften von Verbindungselementen aus korrosionsbeständigen
nichtrostenden Stählen –
Teil 1: Schrauben mit festgelegten Stahlsorten und Festigkeitsklassen (ISO 3506-1:2020);
Englische Fassung EN ISO 3506-1:2020,
Englische Übersetzung von DIN EN ISO 3506-1:2020-08

Fixations –
Caractéristiques mécaniques des fixations en acier inoxydable résistant à la corrosion –
Partie 1: Vis, goujons et tiges filetées de grades et classes de qualité spécifiés
(ISO 3506-1:2020);
Version anglaise EN ISO 3506-1:2020,
Traduction anglaise de DIN EN ISO 3506-1:2020-08

Document comprises 48 pages

Translation by DIN-Sprachendienst.

In case of doubt, the German-language original shall be considered authoritative.

A comma is used as the decimal marker.

National foreword

This document (EN ISO 3506-1:2020) has been prepared by Technical Committee ISO/TC 2 “Fasteners” in collaboration with Technical Committee CEN/TC 185 “Fasteners” (Secretariat: BSI, United Kingdom).

The responsible German body involved in its preparation was *DIN-Normenausschuss Mechanische Verbindungselemente* (DIN Standards Committee Fasteners), Working Committee NA 067-00-04 AA “Fasteners made of stainless steels and non-ferrous metals”.

The DIN documents corresponding to the international documents referred to in this document are as follows:

ISO 68-1	DIN ISO 68-1
ISO 261	DIN ISO 261
ISO 262	DIN ISO 262
ISO 273	DIN EN 20273
ISO 724	DIN ISO 724
ISO 898-1	DIN EN ISO 898-1
ISO 965-1	DIN ISO 965-1
ISO 965-2	DIN ISO 965-2
ISO 1891-4	DIN EN ISO 1891-4
ISO 3506-2	DIN EN ISO 3506-2
ISO 3506-3	DIN EN ISO 3506-3
ISO 6506-1	DIN EN ISO 6506-1
ISO 6507-1	DIN EN ISO 6507-1
ISO 6508-1	DIN EN ISO 6508-1
ISO 6892-1	DIN EN ISO 6892-1
ISO 7500-1	DIN EN ISO 7500-1
ISO 9513	DIN EN ISO 9513
ISO 16048	DIN EN ISO 16048
ISO 16228	DIN EN ISO 16228
ISO 16426	DIN EN ISO 16426

For current information on this document, please go to DIN’s website (www.din.de) and search for the document number in question.

Amendments

This standard differs from DIN EN ISO 3506-1:2010-04 as follows:

- a) the structure and content of the standard have been brought in line with ISO 898-1;
- b) operational temperature ranges have been added (Clause 1);
- c) normative references have been updated;
- d) duplex (austenitic-ferritic) stainless steels for property classes 70, 80 and 100 have been added (see Figure 1);
- e) steel grade A8 has been included;

- f) property class 100 for austenitic stainless steel grades has been added;
- g) finish has been added (6.3);
- h) the matching of stainless steel bolt and nut grades has been added (6.4);
- i) calculated minimum ultimate tensile loads and minimum loads at 0,2 % non-proportional elongation (Table 4 to Table 7) and rounding rules have been added;
- j) breaking torque values for thread sizes M12 and M16 have been deleted from Table 8;
- k) the applicability of test methods (Clause 8), also in relation to full and reduced loadability, has been added;
- l) reduced loadability for fasteners due to head or shank design has been added (8.2);
- m) requirements and guidance for inspection procedures have been added (8.3 to 8.6);
- n) the tensile test procedure (9.1: use of electronic devices, simultaneous determination of tensile strength, non-proportional elongation and elongation A), and its application to fasteners with reduced loadability (9.2 , 9.3 and 9.5) have been entirely amended;
- o) symbols relating to the tensile test and to the elongation test on samples or fasteners have been redefined;
- p) the wedge tensile test and the hardness test (9.4 and 9.6) have been improved on the basis of ISO 898-1;
- q) marking and labelling, particularly for fasteners with reduced loadability, have been included (Clause 10);
- r) annexes concerning several parts of the ISO 3506 standards series have been removed and are now included in a new document (ISO 3506-6);
- s) the Bibliography has been updated;
- t) the standard has been editorially revised (with a focus on ISO 898-1).

Previous editions

DIN 267-11: 1968-05, 1977-02, 1980-01

DIN ISO 3506: 1992-12

DIN EN ISO 3506-1: 1998-03, 2010-04

National Annex NA
(informative)

Bibliography

DIN EN 20273, *Fasteners — Clearance holes for bolts and screws*

DIN EN ISO 898-1, *Mechanical properties of fasteners made of carbon steel and alloy steel — Part 1: Bolts, screws and studs with specified property classes — Coarse thread and fine pitch thread*

DIN EN ISO 1891-4, *Fasteners — Vocabulary — Part 4: Controls, inspection, delivery, acceptance and quality*

DIN EN ISO 3506-2, *Mechanical properties of corrosion-resistant stainless steel fasteners — Part 2: Nuts*

DIN EN ISO 3506-3, *Mechanical properties of corrosion-resistant stainless steel fasteners — Part 3: Set screws and similar fasteners not under tensile stress*

DIN EN ISO 6506-1, *Metallic materials — Brinell hardness test — Part 1: Test methods*

DIN EN ISO 6507-1, *Metallic materials — Vickers hardness test — Part 1: Test method*

DIN EN ISO 6508-1, *Metallic materials — Rockwell hardness test — Part 1: Test method*

DIN EN ISO 6892-1, *Metallic materials — Tensile testing — Part 1: Method of test at room temperature*

DIN EN ISO 7500-1, *Metallic materials — Calibration and verification of static uniaxial testing machines — Part 1: Tension/compression testing machines — Calibration and verification of the force-measuring system*

DIN EN ISO 9513, *Metallic materials — Calibration of extensometer systems used in uniaxial testing*

DIN EN ISO 16048, *Passivation of corrosion-resistant stainless-steel fasteners*

DIN EN ISO 16228, *Metallic products — Types of inspection documents*

DIN EN ISO 16426, *Fasteners — Quality assurance system*

DIN ISO 68-1, *ISO general purpose metric screw threads — Basic profile — Part 1: Metric screw threads*

DIN ISO 261, *ISO general purpose metric screw threads — General plan*

DIN ISO 262, *ISO general purpose metric screw threads — Selected sizes for screws, bolts and nuts*

DIN ISO 724, *ISO general purpose metric screw threads — Basic dimensions*

DIN ISO 965-1, *ISO general purpose metric screw threads — Tolerances — Part 1: Principles and basic data*

DIN ISO 965-2, *ISO general purpose metric screw threads — Tolerances — Part 2: Limits of sizes for general purpose external and internal screw threads — Medium quality*

English Version

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aus korrosionsbeständigen nichtrostenden Stählen -
Teil 1: Schrauben mit festgelegten Stahlsorten
und Festigkeitsklassen
(ISO 3506-1:2020)

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

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Contents

Page

European foreword	4
Foreword	5
Introduction	7
1 Scope	8
2 Normative references	9
3 Terms and definitions	9
4 Symbols	10
5 Designation system for stainless steel grades and property classes	11
5.1 General	11
5.2 Designation of stainless steel grades (first block)	12
5.3 Designation of property classes (second block)	13
6 Materials	13
6.1 Chemical composition	13
6.2 Heat treatment for martensitic stainless steel fasteners	14
6.3 Finish	15
6.4 Corrosion resistance	15
7 Mechanical and physical properties	15
8 Applicability of test methods and inspection	21
8.1 Applicability of test methods	21
8.2 Loadability of fasteners	21
8.2.1 Fasteners with full loadability	21
8.2.2 Fasteners which have reduced loadability due to their geometry	22
8.3 Manufacturer's inspection	23
8.4 Supplier's inspection	23
8.5 Purchaser's inspection	23
8.6 Delivery of test results	24
9 Test methods	24
9.1 Tensile test for fasteners	24
9.1.1 General	24
9.1.2 Test procedure for the simultaneous determination of R_{mf} , R_{pf} and A	25
9.1.3 Reference test procedure for the determination of stress at 0,2 % non-proportional elongation, R_{pf}	26
9.1.4 Alternative test procedure for the determination of elongation, A	28
9.1.5 Test results and requirements for tensile strength, R_{mf}	29
9.1.6 Test results and requirements for stress at 0,2 % non-proportional elongation, R_{pf}	29
9.1.7 Test results and requirements for elongation after fracture, A	30
9.2 Tensile test for bolts and screws with reduced loadability due to head design	30
9.2.1 General	30
9.2.2 Test procedure	30
9.2.3 Test results and requirements for ultimate tensile load, F_{mf}	30
9.3 Tensile test for fasteners with reduced loadability due to shank design	30
9.3.1 General	30
9.3.2 Test procedure	31
9.3.3 Test results for tensile strength	31
9.4 Wedge tensile test	31
9.4.1 General	31
9.4.2 Test procedure	33
9.4.3 Test results and requirements	33