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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**

*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*

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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](http://www.iso.org/directives)).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

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](http://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 3506-1:2009), 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](#));
- finish (see [6.3](#)) has been added;
- the matching of stainless steel bolt and nut grades (see [6.4](#)) has been added;
- calculated minimum ultimate tensile loads and minimum loads at 0,2 % non-proportional elongation (see [Tables 4 to 7](#)) and rounding rules have been added;
- reduced loadability for fasteners due to head or shank design (see [8.2](#)) has been added;
- requirements and guidance for inspection procedures (see [8.3](#) to [8.6](#)) have been added;
- operational temperature ranges (see [Clause 1](#)) have been clarified;
- the applicability of test methods (see [Clause 8](#)), also in relation to full and reduced loadability, has been added;
- the tensile test procedure (see [9.1](#)) has been entirely amended, and application to fasteners with reduced loadability (see [9.2](#) and [9.3](#)) has been added;

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- the wedge tensile test (see [9.4](#)) and hardness test (see [9.6](#)) have been improved;
- marking and labelling (see [Clause 10](#)) have been improved, and fasteners with reduced loadability have been included;
- mechanical properties at elevated temperatures and application at low temperatures (see [Annex A](#)) have been improved;
- the structure and content of this document have been brought in line with ISO 898-1.

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](http://www.iso.org/members.html).

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