



National Standards Authority of Ireland

IRISH STANDARD

**I.S. EN 4498:2006**

ICS 49.030.20

**AEROSPACE SERIES - BOLTS, LARGE  
BIHEXAGONAL HEAD, CLOSE TOLERANCE  
NORMAL SHANK, MEDIUM LENGTH THREAD,  
IN HEAT RESISTING NICKEL BASE ALLOY,  
PASSIVATED, WITH ALUMINIUM PIGMENTED  
COATING  
- CLASSIFICATION: 1 550 MPA (AT AMBIENT  
TEMPERATURE) / 315 °C**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 4498**

December 2005

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English Version

**Aerospace series - Bolts, large bihexagonal head, close tolerance normal shank, medium length thread, in heat resisting nickel base alloy, passivated, with aluminium pigmented coating - Classification: 1 550 MPa (at ambient temperature) / 315 °C**

Série aéronautique - Vis à tête bihexagonale large, fût normal à tolérance serrée, filetage moyen, en alliage résistant à chaud à base de nickel, passivées, avec revêtement aluminé-organique - Classification : 1 550 MPa (à température ambiante) / 315 °C

Luft- und Raumfahrt - Sechskant-Paßschrauben, mittlere Gewindelänge, aus hochwarmfester Nickelbasislegierung, passiviert, mit Aluminium pigmentierte Beschichtung - Klasse: 1 550 MPa (bei Raumtemperatur) / 315 °C

This European Standard was approved by CEN on 26 October 2005.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



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

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<b>Contents</b>		<b>Page</b>
<b>Foreword .....</b>		<b>3</b>
<b>1</b>	<b>Scope .....</b>	<b>4</b>
<b>2</b>	<b>Normative references .....</b>	<b>4</b>
<b>3</b>	<b>Required characteristics .....</b>	<b>5</b>
<b>4</b>	<b>Designation .....</b>	<b>8</b>
<b>5</b>	<b>Marking .....</b>	<b>8</b>
<b>6</b>	<b>Technical specification.....</b>	<b>8</b>
<b>7</b>	<b>Oversized bolts .....</b>	<b>8</b>

## **Foreword**

This European Standard (EN 4498:2005) has been prepared by the European Association of Aerospace Manufacturers - Standardization (AECMA-STAN).

After enquiries and votes carried out in accordance with the rules of this Association, this Standard has received the approval of the National Associations and the Official Services of the member countries of AECMA, prior to its presentation to CEN.

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 2006, and conflicting national standards shall be withdrawn at the latest by June 2006.

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.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

## EN 4498:2005 (E)

### 1 Scope

This standard specifies the characteristics of bolts, large bihexagonal head, close tolerance normal shank, medium length thread, in heat resisting nickel base alloy, passivated, with aluminium pigmented coating.

Classification: 1 550 MPa <sup>1)</sup> / 315 °C <sup>2)</sup>

### 2 Normative references

The following referenced documents are indispensable for the application 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.

ISO 3186, *Aerospace — Bolts, large bihexagonal head, normal shank, short or medium length MJ threads, metallic material, coated or uncoated, strength classes 1 250 MPa to 1 800 MPa — Dimensions.*

ISO 3353-1, *Aerospace — Lead and runout threads — Part 1: Rolled external threads.*

ISO 4095, *Aerospace — Bihexagonal drives — Wrenching configuration — Metric series.*

ISO 5855-2, *Aerospace — MJ threads — Part 2: Limit dimensions for bolts and nuts.*

ISO 7913, *Aerospace — Bolts and screws, metric — Tolerances of form and position.*

ISO 9154, *Aerospace — Bolts, with MJ threads, made of heat-resistant nickel-based alloy, strength class 1 550 MPa — Procurement specification.*

EN 2424, *Aerospace series — Marking of aerospace products.*

EN 2516, *Aerospace series — Passivation of corrosion resisting steels and decontamination of nickel base alloys.*

EN 3769, *Aerospace series — Electrolytic polishing of corrosion resistant steels and heat resisting alloys.*

EN 4016, *Aerospace series — Oversized bolts.*<sup>3)</sup>

EN 4474, *Aerospace series — Aluminium pigmented coatings — Coating methods.*<sup>3)</sup>

EN 9100, *Aerospace series — Quality management systems — Requirements (based on ISO 9001:2000) and Quality systems — Model for quality assurance in design, development, production, installation and servicing (based on ISO 9001:1994).*

EN 9133, *Aerospace series — Quality management systems — Qualification Procedure for aerospace standard parts.*

MIL-L-87132B, *Lubricant, Cetyl Alcohol, 1-Hexadecanol, Application to Fasteners.*<sup>4)</sup>

TR 3775, *Aerospace series — Bolts and pins — Materials.*<sup>5)</sup>

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1) Minimum tensile strength of the material at ambient temperature.

2) Maximum temperature that the bolt can withstand without continuous change in its original characteristics, after return to ambient temperature. The maximum temperature is determined by the coating.

3) Published as AECMA Prestandard at the date of publication of this standard.

4) Published by: Department of Defense (DoD), the Pentagon, Washington, D.C.20301, USA.

5) Published as AECMA Technical Report at the date of publication of this standard.

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