



National Standards Authority of Ireland

IRISH STANDARD

**I.S. EN 2002-001:2006**

ICS 49.025.05  
49.025.15

**AEROSPACE SERIES - METALLIC**  
**MATERIALS - TEST METHODS - PART 1:**  
**TENSILE TESTING AT AMBIENT**  
**TEMPERATURE**

National Standards  
Authority of Ireland  
Glasnevin, Dublin 9  
Ireland

Tel: +353 1 807 3800  
Fax: +353 1 807 3838  
<http://www.nsai.ie>

**Sales**  
<http://www.standards.ie>

*This Irish Standard was  
published under the  
authority of the National  
Standards Authority of  
Ireland and comes into  
effect on:*

*February 3, 2006*

**NO COPYING WITHOUT NSAI  
PERMISSION EXCEPT AS  
PERMITTED BY COPYRIGHT  
LAW**

© NSAI 2006

**Price Code**

Údarás um Chaighdeán Náisiúnta na hÉireann



EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 2002-001**

November 2005

ICS 49.025.05; 49.025.15

English Version

**Aerospace series - Metallic materials - Test methods - Part 1:  
Tensile testing at ambient temperature**

Série aérospatiale - Matériaux métalliques - Méthodes  
d'essais applicables - Partie 1 : Essais de traction à  
température ambiante

Luft-und Raumfahrt - Metallische Werkstoffe -  
Prüfverfahren - Teil 1: Zugversuch bei Raumtemperatur

This European Standard was approved by CEN on 19 September 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

**Management Centre: rue de Stassart, 36 B-1050 Brussels**

| <b>Contents</b>   | <b>Page</b> |
|---|-------------|
| <b>Foreword .....</b>   | <b>3</b>    |
| <b>Introduction .....</b>   | <b>4</b>    |
| <b>1 Scope .....</b>  | <b>4</b>    |
| <b>2 Normative references .....</b>   | <b>4</b>    |
| <b>3 Terms, definitions and symbols .....</b>   | <b>4</b>    |
| <b>4 Health and safety .....</b>  | <b>7</b>    |
| <b>5 Principle .....</b>  | <b>7</b>    |
| <b>6 Testing requirements .....</b>   | <b>7</b>    |
| <b>7 Test report .....</b>  | <b>13</b>   |
| <b>Annex A (normative) Types of test piece to be used for sheet and strip with thickness less than or equal to 8 mm .....</b>   | <b>15</b>   |
| <b>Annex B (normative) Types of non-machined test piece to be used in the case of bar, section and wire with a diameter or thickness less than or equal to 8 mm .....</b>                       | <b>17</b>   |
| <b>Annex C (normative) Types of machined test piece to be used in the case of bar, section, plate and wire with diameter or thickness greater than 8 mm and for forgings and castings .....</b> | <b>18</b>   |
| <b>Annex D (normative) Types of test piece to be used in the case of tubes .....</b>  | <b>21</b>   |

## **Foreword**

This European Standard (EN 2002-001:2005) 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 May 2006, and conflicting national standards shall be withdrawn at the latest by May 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 2002-001:2005 (E)

# Introduction

This standard is part of the series of EN metallic material standards for aerospace applications. The general organization of this series is described in EN 4258.

## 1 Scope

This standard specifies the requirements for the tensile testing of metallic materials at ambient temperature for aerospace applications.

It shall be applied when referred to in the EN technical specification or material standard unless otherwise specified on the drawing, order or inspection schedule.

## 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.

EN ISO 7500-1, *Metallic materials – Verification of static uniaxial testing machines – Part 1: Tension/compression testing machines – Verification and calibration of the force-measuring system.*

EN ISO 9513, *Metallic materials – Calibration of extensometers used in uniaxial testing.*

EN 4258, *Aerospace series – Metallic materials – General organization of standardization – Links between types of EN standards and their use.*

EN 4259, *Aerospace series – Metallic materials – Definition of general terms.* <sup>1)</sup>

ASTM E-1012, *Standard practice for verification of specimen alignment under tensile loading.* <sup>2)</sup>

## 3 Terms, definitions and symbols

For the purposes of this standard, the terms, definitions and symbols given in EN 4259 and the following given in Table 1 apply.

---

<sup>1)</sup> Published as AECMA Prestandard at the date of publication of this standard.

<sup>2)</sup> This standard is published by: American Society for Testing and Materials (ASTM), 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, USA.

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

- 
- Looking for additional Standards? Visit Intertek Inform Infostore
  - Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation
-