ICS 49.025.05, 49.025.15 SLOVENSKÁ TECHNICKÁ NORMA Júl 2026

STN	**Letectvo a kozmonautika Kovové materiály Skúšobné metódy Časť 002: Skúška ťahom pri zvýšenej teplote**	**STN EN 2002-002 31 2062**

Aerospace series - Metallic materials - Test methods - Part 2: Tensile testing at elevated temperature

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 06/26

Obsahuje: EN 2002-002:2026

Oznámením tejto normy sa ruší
STN EN 2002-002 (31 2062) z mája 2006

142572

Úrad pre normalizáciu, metrológiu a skúšobníctvo Slovenskej republiky, 2026
Slovenská technická norma a technická normalizačná informácia je chránená zákonom č. 60/2018 Z. z. o technickej normalizácii v znení neskorších predpisov.

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 2002-002

April 2026

ICS 49.025.05; 49.025.15 Supersedes EN 2002-002:2005

English Version

Aerospace series - Metallic materials - Test methods - Part 2: Tensile testing at elevated temperature

Série aérospatiale - Matériaux métalliques - Méthodes d'essais - Partie 002 : Essais de traction à température élevée

Luft- und Raumfahrt - Metallische Werkstoffe - Prüfverfahren - Teil 002: Zugversuch bei Hochtemperatur

This European Standard was approved by CEN on 16 February 2026.

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.

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



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

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

© 2026 CEN All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.

Ref. No. EN 2002-002:2026 E

Contents

Page

European foreword ... 3
Introduction ... 4
1 Scope ... 5
2 Normative references ... 5
3 Terms and definitions ... 5
4 Health and safety ... 10
5 Principle of tensile testing ... 10
6 Testing requirements ... 11
6.1 Resources ... 11
6.1.1 Equipment/plant ... 11
6.1.2 Materials/reagents ... 12
6.1.3 Qualification of personnel ... 13
6.2 Test samples/test pieces ... 13
6.2.1 Shape and dimensions ... 13
6.2.2 Product types ... 13
6.2.3 Preparation of test pieces ... 13
6.3 Testing procedure ... 14
6.3.1 Determination of the cross-sectional area ... 14
6.3.2 Marking the original gauge length (L_0) ... 14
6.3.3 Method of gripping ... 15
6.3.4 Extensometer ... 15
6.3.5 Attachment of thermocouples ... 15
6.3.6 Temperature of test ... 15
6.3.7 Speed of testing ... 16
6.3.8 Young's modulus of elasticity (E), selection of test method ... 16
6.4 Determination and expression of test results ... 17
6.4.1 Determination of Young's modulus of elasticity (E) ... 17
6.4.2 Determination of proof stress (R_p) ... 17
6.4.3 Determination of tensile strength (R_m) ... 17
6.4.4 Determination of percentage elongation after fracture (A o$AL0$) ... 17
6.4.5 Determination of percentage reduction of area after fracture (Z) ... 18
7 Test report ... 18
Annex A (normative) Test pieces to be used for sheets and strips with thickness less than or equal to 8 mm ... 21
Annex B (normative) Non-machined test pieces to be used for bars, sections and wires with a diameter or thickness less than or equal to 8 mm ... 23
Annex C (normative) Machined test pieces to be used for bars, sections, plates and wires with diameter or thickness greater than 8 mm and for forgings and castings ... 24
Annex D (normative) Test pieces to be used for tubes ... 27
Bibliography ... 29

European foreword

This document (EN 2002-002:2026) has been prepared by ASD-STAN.

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

This document shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 2026, and conflicting national standards shall be withdrawn at the latest by October 2026.

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 2002-002:2005.

EN 2002-002:2026 includes the following significant technical changes with respect to EN 2002-002:2005-11:

— general editorial improvements.

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

Introduction

This document 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 document is applicable to the tensile testing and specifies the requirements of metallic materials at elevated temperature for aerospace applications.

It is 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 documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 4259, *Aerospace series — Metallic materials — Definition of general terms*

EN 60584-1, *Thermocouples — Part 1: EMF specifications and tolerances*

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* (ISO 7500-1)

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

koniec náhľadu – text ďalej pokračuje v platenej verzii STN