ICS 49.025.20 SLOVENSKÁ TECHNICKÁ NORMA September 2019

STN	**Letectvo a kozmonautika Hliník a zliatiny hliníka a horčíka Technická špecifikácia Časť 1: Hrubé plechy z hliníka a zo zliatiny hliníka**	**STN EN 4400-1 31 2303**

Aerospace series - Aluminium and aluminium- and magnesium- alloys - Technical specification - Part 1: Aluminium and aluminium alloy plate

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. 08/19

Obsahuje: EN 4400-1:2019

Spolu s STN EN 4400-6, STN EN 4400-3 a STN EN 4400-2 ruší
STN EN 2070-1+A1 (31 2303) z mája 1999
Spolu s STN EN 4400-2 ruší
STN EN 2070-2 (31 2303) z mája 1999

129058

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 4400-1

March 2019

ICS

Supersedes EN 2070-1:1989, EN 2070-2:1989

English Version

Aerospace series - Aluminium and aluminium- and magnesium- alloys - Technical specification - Part 1: Aluminium and aluminium alloy plate

Série aérospatiale - Aluminium et alliages d'aluminium et magnésium - Spécification technique - Partie 1 : Tôles épaisses en aluminium et alliages d'aluminium

Luft- und Raumfahrt - Aluminium und Aluminium- und Magnesiumlegierungen - Technische Lieferbedingungen - Teil 1: Platten aus Aluminium und Aluminiumlegierungen

This European Standard was approved by CEN on 28 August 2017.

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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.

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

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Ref. No. EN 4400-1:2019 E

EN 4400-1:2019 (E)

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European foreword

This document (EN 4400-1:2019) has been prepared by the Aerospace and Defence Industries Association of Europe - Standardization (ASD-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 ASD, 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 September 2019, and conflicting national standards shall be withdrawn at the latest by September 2019.

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 2070-1:1989, EN 2070-1/A1:1993, EN 2070-2:1989.

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

Introduction

This European 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 European Standard defines the requirements for the ordering, manufacture, testing, inspection and delivery of aluminium and aluminium alloy plate, clad or unclad, supplied in the as-rolled or machined condition. It shall be applied when referred to and in conjunction with the EN 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 515, *Aluminium and aluminium alloys — Wrought products — Temper designations*

EN 2002-001, *Aerospace series — Metallic materials — Test methods — Part 001: Tensile testing at ambient temperature*

EN 2002-6, *Aerospace series — Metallic materials — Test methods — Part 6: Bend testing* 1)

EN 2002-8, *Aerospace series — Metallic materials — Test methods — Part 8: Micrographic determination of grain size* 1)

EN 2002-22, *Aerospace series – Metallic materials — Test methods — Part* 22: *Plane strain fracture toughness test* 2)

EN 2002-23, *Aerospace series — Test methods for metallic materials — Part 23: Sharp-notch tension testing* 1)

EN 2004-1, *Aerospace series — Test methods for aluminium and aluminium alloy products — Part 1: Determination of electrical conductivity of wrought aluminium alloys*

EN 2004-10, *Aerospace series — Test methods for aluminium and aluminium alloy products — Part 10: Preparation of micrographic specimens for aluminium alloys* 1)

EN 2007, *Aerospace series — Test methods for aluminium and aluminium alloy products — Metallographic determination of cladding thickness and copper diffusion in the cladding for rolled products* 1)

EN 2021, *Aerospace series — Metallic materials — Test methods — Shear testing for thin flat product* 1)

EN 2032-001, Aerospace series — Metallic materials — Part 001: Conventional designation

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1) Published as ASD-STAN Prestandard at the date of publication of this standard by AeroSpace and Defence industries Association of Europe - Standardization (ASD-STAN), http://www.asd-stan.org

2) In preparation at the date of publication of this standard.

EN 2032-2, Aerospace series — Metallic materials — Part 2: Coding of metallurgical condition in delivery condition

EN 2078, *Aerospace series — Metallic materials — Manufacturing schedule, inspection schedule, inspection and test report — Definition, general principles, preparation and approval*

EN 2716, *Aerospace series — Test method — Determination of susceptibility to intergranular corrosion — Wrought aluminium alloy products — AL-P2XXX- series, AL-P7XXX- series and aluminium-lithium alloys* 1)

EN 2720, *Aerospace series — Test method for metallic materials — Testing of susceptibility to exfoliation corrosion in 2XXX and 7XXX series wrought aluminium alloy products for aerospace constructions* 1)

EN 3874, *Aerospace series — Test methods for metallic materials — Constant amplitude force-controlled low cycle fatigue testing* 1)

EN 3987, *Aerospace series — Test methods for metallic materials — Constant amplitude force-controlled high cycle fatigue testing*

EN 3988, *Aerospace series — Test methods for metallic materials — Constant amplitude strain-controlled low cycle fatigue testing* 1)

EN 4050-4, *Aerospace series — Test method for metallic materials — Ultrasonic inspection of bars, plates, forging stock and forgings — Part 4: Acceptance criteria*

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* 1)

EN 4268, *Aerospace series – Metallic materials – Heat treatment facilities – General requirements*

EN 4522, *Aerospace series — Metallic materials — Test methods — Pin-type bearing test of yield strength* 1)

EN 4523, *Aerospace series — Metallic materials — Test methods — Compression testing* 1)

EN 4524, *Aerospace series — Metallic materials — Test methods — Measurement of fatigue crack growth rates* 1)

EN 4525, *Aerospace series — Aluminium and aluminium alloys — Test methods — Shear testing* 1)

EN 4527, *Aerospace series — Aluminium and aluminium alloy products — Test methods — Determining susceptibility to stress-corrosion cracking* 1)

EN 6018, *Aerospace series — Test methods for metallic materials — Determination of density according to displacement method*

EN 6019, *Aerospace series — Test methods for metallic materials — Recommended practice for R-Curve and K_{co} determination* 1)

EN 6072, *Aerospace series — Metallic materials — Test methods — Constant amplitude fatigue testing*

EN 9100, *Quality Management Systems — Requirements for Aviation, Space and Defence Organizations*

EN 9133, *Aerospace series — Quality Management Systems — Qualification Procedure for Aerospace Standard Products*

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

EN 12258-1, *Aluminium and aluminium alloys – Terms and definitions — Part 1: General terms*

TR 2410, *Aerospace series — Metallic materials — Relationship between dimensional standards and material standards* 3)

3) Published as ASD-STAN Technical Report at the date of publication of this standard by AeroSpace and Defence industries Association of Europe - Standardization (ASD-STAN), http://www.asd-stan.org