

Aerospace series - Steel X5CrNiCu15-5 (1.4545) -
Consumable electrode remelted (ESR or VAR) -
Solution treated and precipitation treated (H1025) -
**Bars for machining - a or D ≤ 250 mm - 1 070 MPa ≤
Rm ≤ 1 200 MPa - Premium quality (pq)**

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 4842:2023 sisaldab Euroopa standardi EN 4842:2023 ingliskeelset teksti. Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 11.10.2023. Standard on kättesaadav Eesti Standardimis-ja Akrediteerimiskeskusest.	This Estonian standard EVS-EN 4842:2023 consists of the English text of the European standard EN 4842:2023. This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation. Date of Availability of the European standard is 11.10.2023. The standard is available from the Estonian Centre for Standardisation and Accreditation.
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ICS 49.025.15

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English Version

**Aerospace series - Steel X5CrNiCu15-5 (1.4545) -
Consumable electrode remelted (ESR or VAR) - Solution
treated and precipitation treated (H1025) - Bars for
machining - a or $D \leq 250$ mm - $1\ 070\ \text{MPa} \leq R_m \leq 1\ 200$
MPa - Premium quality (pq)**

Série aérospatiale - Acier X5CrNiCu15-5 (1.4545) -
Refondu à l'électrode consommable (ESR ou VAR) - Mis
en solution et précipité (H1025) - Barres pour usinage
- a ou $D \leq 250$ mm - $1\ 070\ \text{MPa} \leq R_m \leq 1\ 200\ \text{MPa}$ -
Première qualité (pq)

Luft- und Raumfahrt - Stahl X5CrNiCu15-5 (1.4545) -
Mit selbstverzehrender Elektrode umgeschmolzen
(ESR oder VAR) - Lösungsgeglüht und
ausscheidungsgehärtet (H1025) - Stangen zur
spanenden Bearbeitung - a oder $D \leq 250$ mm - $1\ 070$
MPa $\leq R_m \leq 1\ 200$ MPa - Beste Güte (pq)

This European Standard was approved by CEN on 16 July 2023.

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

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European foreword

This document (EN 4842:2023) 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 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 April 2024, and conflicting national standards shall be withdrawn at the latest by April 2024.

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 4842:2019.

Compared to the previous edition EN 4842:2019 the test requirement has changed.

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

This document has been prepared in accordance with EN 4500-005.

1 Scope

This document specifies the requirements relating to:

Steel X5CrNiCu15-5 (1.4545)
Consumable electrode remelted (ESR or VAR)
Solution treated and precipitation treated (H1025)
Bars for machining
 a or $D \leq 250$ mm
 $1\,070\text{ MPa} \leq R_m \leq 1\,200\text{ MPa}$
Premium quality (pq)

for aerospace applications.

NOTE Other designation: The ASD-STAN designation of this material is FE-PM1802.
Only the chemical composition of this document is considered.

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 2043, *Aerospace series — Metallic materials — General requirements for semi-finished product qualification (excluding forgings and castings)*

EN 2950, *Aerospace series — Test method — Wrought heat resisting alloys semi-finished products and parts — Conditions for macrographic and micrographic examination — Atlas of structures and defects*

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

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

EN 4700-002, *Aerospace series — Steel and heat resisting alloys — Wrought products — Technical specification — Part 002: Bars and sections*

ISO 1143,² *Metallic materials — Rotating bar bending fatigue testing*

ASTM E45,³ *Standard Test Methods for Determining the Inclusion Content of Steel*

SAE AMS 2315,⁴ *Determination of Delta Ferrite Content*

¹ Published as ASD-STAN Standard at the date of publication of this document by Aerospace and Defence Industries Association of Europe — Standardization (ASD-STAN), <https://www.asd-stan.org/>.

² Published by: International Organization for Standardization (ISO), <http://www.iso.ch/>.

³ Published by: American Society for Testing and Materials (ASTM International), <https://www.astm.org/>.

⁴ Published by: Society of Automotive Engineers (SAE), <https://www.sae.org/>.