

Aerospace series - Copper or copper alloy lightweight conductors for electrical cables - Product standard (Normal and tight tolerances)

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 4434:2005 sisaldab Euroopa standardi EN 4434:2005 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 28.12.2005 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 4434:2005 consists of the English text of the European standard EN 4434:2005.</p> <p>This document is endorsed on 28.12.2005 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala: This standard specifies the dimensions, linear resistance, mechanical characteristics, construction and mass of lightweight conductors, normal and tight tolerances, in copper or copper alloy for electrical cables for aerospace applications.</p>	<p>Scope: This standard specifies the dimensions, linear resistance, mechanical characteristics, construction and mass of lightweight conductors, normal and tight tolerances, in copper or copper alloy for electrical cables for aerospace applications.</p>
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ICS 49.060

Võtmesõnad: aerospace transport, coats, copper, electric cables, marking

ICS 49.060

English Version

**Aerospace series - Copper or copper alloy lightweight
conductors for electrical cables - Product standard (Normal and
tight tolerances)**

Série aérospatiale - Conducteurs à tolérances réduites en
cuivre ou alliage de cuivre pour câbles électriques - Norme
de produit (Tolérances normales et réduites)

Luft- und Raumfahrt - Leichter Leiter aus Kupfer oder
Kupferlegierung für elektrische Leitungen - Produktnorm
(Normale und enge Toleranzen)

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
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Contents

Page

Foreword	3
1 Scope	4
2 Normative references	4
3 Terms, definitions and symbols	4
4 Conductor materials and construction	4
5 Required characteristics	6
6 Test methods.....	7
7 Designation	8
8 Marking, packaging and delivery lengths	8

Foreword

This European Standard (EN 4434:2005) 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.

1 Scope

This standard specifies the dimensions, linear resistance, mechanical characteristics, construction and mass of lightweight conductors, normal and tight tolerances, in copper or copper alloy for electrical cables for aerospace applications.

It applies to stranded conductors, with a nominal cross-sectional area of 0,15 mm² to 14 mm² inclusive.

The conductors for thermocouple extension and fire-resistant cables are not covered by this standard.

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 2083, *Aerospace series — Copper or copper alloy conductors for electrical cables — Product standard.*

EN 3475-100, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 100: General.*

EN 3475-301, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 301: Ohmic resistance per unit length.*

EN 3475-506, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 506: Plating continuity.*

EN 3475-507, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 507: Adherence of plating.*

IEC 60028 (1925-01), *International standard of resistance for copper.*

IEC 60344 (1980-01), *Guide to the calculation of resistance of plain and coated copper conductors of low-frequency cables and wires.*

3 Terms, definitions and symbols

For the purposes of this standard, the terms, definitions and symbols given in EN 3475-100 for conductors apply.

4 Conductor materials and construction

4.1 Materials

Conductors complying with this standard are made from strands in high conductivity annealed electrolytic copper (see IEC 60028) or copper alloy.

The conductors for nominal cross-sectional areas 0,15 mm² and 0,25 mm² shall be made from copper alloy.

4.2 Metal plating

The individual strands may be:

- uncoated (code A);
- or provided with uniform platings of tin (code B) or silver (code C) or nickel (code D).