



SLOVENSKI STANDARD SIST EN 2346-002:2009

01-februar-2009

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Aerospace series - Cable, electrical, fire resistant - Operating temperatures between - 65 °C and 260 °C - Part 002: General

Luft- und Raumfahrt - Feuerbeständige elektrische Leitungen - Betriebstemperaturen zwischen - 65 °C und 260 °C - Teil 002: Allgemeines

Série aérospatiale - Câbles électriques résistant au feu - Températures de fonctionnement comprises entre - 65 °C et 260 °C - Partie 002 : Généralités

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Ta slovenski standard je istoveten z: EN 2346-002:2006

ICS:

49.060 Š^cp \ æš Ą^• [|b \ æ Aerospace electric
^|\ dā } æ [] ! ^ { æš Ą ã c { ã equipment and systems

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 2346-002

June 2006

ICS 49.060

English Version

Aerospace series - Cable, electrical, fire resistant - Operating temperatures between - 65 °C and 260 °C - Part 002: General

Série aérospatiale - Câbles électriques résistant au feu -
Températures de fonctionnement comprises entre - 65 °C
et 260 °C - Partie 002 : Généralités

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Leitungen - Betriebstemperaturen zwischen - 65 °C und
260 °C - Teil 002: Allgemeines

This European Standard was approved by CEN on 3 February 2006.

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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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Foreword

This European Standard (EN 2346-002:2006) 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 December 2006, and conflicting national standards shall be withdrawn at the latest by December 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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

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EN 2346-002:2006 (E)**1 Scope**

This standard specifies the list of product standards and common characteristics of fire resistant or fire-proof electrical cables for use in the on-board electrical systems of aircraft at operating temperatures between – 65 °C and 260 °C. (Except otherwise specified in the product 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.

IEC 28:1925, *International standard of resistance for copper.*

EN 2234, *Aerospace series – Cable, electrical, fire resistant – Technical specification.*¹⁾

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

EN 3838, *Aerospace series – Requirements and tests on user-applied markings on aircraft electrical cables.*¹⁾

TR 6058, *Aerospace series – Cable code identification list.*²⁾

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3 Definitions

For the purposes of this standard, the definitions given in EN 3475-100 apply.
<http://standards.iteh.ai/catalog/standards/sist/en-2346-002-2009>
<https://doi.org/10.4254/9810-70061ccBab7/sist-en-2346-002-2009>

4 List of product standards

EN 2346-003, *Aerospace series – Cable, electrical, fire resistant – Operating temperatures between – 65 °C and 260 °C – Part 003: DL family, single core – Product standard.*

EN 2346-004, *Aerospace series – Cable, electrical, fire resistant – Operating temperatures between – 65 °C and 260 °C – Part 004: DN family, single UV laser printable and multicore assembly – Light weight – Product standard.*

EN 2346-005, *Aerospace series – Cable, electrical, fire-resistant – Operating temperatures between – 65 °C and 260 °C – Part 005: DW family, single UV laser printable and multicore assembly – Light weight – Product standard.*

1) Published at AECMA Prestandard at the date of publication of this standard.

2) Published as AECMA Technical Report at the date of publication of this standard.

5 Materials and construction

5.1 Materials

The individual strands used for the conductors shall be cylindrical and shall be:

- of nickel clad copper alloy for nominal cross sections of 0,4 mm² (code 004) and 0,25 mm² (code 002),
- of nickel clad copper for nominal cross sections $\geq 0,6$ mm² (codes ≥ 006).

The copper shall meet the requirements of IEC 28 and the copper alloy the requirements of EN 2234.

5.2 Construction

5.2.1 Number of cores

See Table 1.

Table 1

Code	A	B	C	D	E	F	G	H	J	K
Number of cores	1	2	3	4	5	6	7	8	9	10
Factor of overall dimensions	—	2	2,15	2,40	2,70	3,00	3,00	3,30	3,60	4,00

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For two cores or more:

- factor for weight: 1,03
- factor for ohmic resistance: 1,03

5.2.2 Colour coding

Outer insulation shall be white with a red stripe to indicate fire-resistant construction. This red stripe to be helical for cables with conductor sizes from 0,25 mm² (code 002) to 5 mm² (code 050) and helical or length wise for cables with conductors sizes from 9 mm² (code 090) to 68 mm² (code 680).

In order to allow a legible UV marking, the width of the stripe shall be between 0,3 mm and 0,5 mm.

For multicore cable without jacket, each core shall be marked with its own designation.

The colour of stripes is given in Table 2.

Table 2

Number of cores	Colour of stripe								
1	Red								
2	Red	Blue							
3	Red	Blue	Yellow						
4	Red	Blue	Yellow	Green					
5	Red	Blue	Yellow	Green	Black				
6	Red	Blue	Yellow	Green	Black	Brown			
7	Red	Blue	Yellow	Green	Black	Brown	Orange		
8	Red	Blue	Yellow	Green	Black	Brown	Orange	Purple	
9	Red	Blue	Yellow	Green	Black	Brown	Orange	Purple	Grey

6 Identification and marking

The identification and marking of cables by the manufacturer shall be in accordance with EN 2234.

As the designation required for orders is generally too long for use in electrical drawings, a shorter cross designation (without colour information) is given by the AECMA TR 6058 plus the corresponding AWG.

This shorter designation shall be used for identification and marking as the following example:

EXAMPLE

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Designation EN2346-003A006
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