



SLOVENSKI STANDARD
SIST EN 2084:2006
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VU_fYbY`n]j]bYËHM b] bUgdYVZ_UWU

Aerospace series - Cables, electric, single-core, general purpose, with conductors in copper or copper alloy - Technical specification

Luft- und Raumfahrt - Elektrische Leitungen, einadrig, für allgemeine Verwendung, mit Leitern aus Kupfer oder Kupferlegierung - Technische Lieferbedingungen

iTeh STANDARD PREVIEW

(cables, monoconducteurs)
Série aérospatiale - Câbles électriques, monoconducteurs, d'usage général, avec conducteurs en cuivre ou en alliage de cuivre - Spécification technique

SIST EN 2084:2006

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Ta slovenski standard je istoveten z: EN 2084:2005

ICS:

49.060

SIST EN 2084:2006

en

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ICS 49.060

English Version

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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.

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

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Foreword

This European Standard (EN 2084:2005) 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.

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1 Scope

This standard specifies the characteristics, test methods, qualification and acceptance conditions of single-core electric cables for general purpose with conductors in copper or copper alloy, intended for installation in aircraft circuits.

The insulation of these cables is designed to withstand a maximum service voltage of 600 V r.m.s. at a frequency not exceeding 2 000 Hz.

They are divided into types, the characteristics of which are given in the product standards. Unless otherwise specified in the product standard, the tests defined in this standard apply.

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.

ISO 2574, *Aircraft — Electrical cables — Identification marking*.

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

EN 9133, *Aerospace series — Quality management systems — Qualification Procedure for Aerospace Standard Part*.¹⁾

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3 Terms, definitions and symbols

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

4 Materials and construction of cables

4.1 Conductors

They shall conform to EN 2083 unless otherwise specified.

4.2 Finished cables

The insulation material shall present a uniform circular cross-section throughout the length of the cable.

Covering over the insulation shall be treated and applied in such a manner that the cables present a smooth appearance and are able to accept marking.

All materials used shall have no corrosive effect upon the conductors and shall not be susceptible to attack by mould or other micro-organisms.

* All parts quoted in Table 1.

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

5 Required characteristics

The characteristics of the cables, tested according to the methods described hereafter shall comply with the values given in the product standard.

6 Tests methods

See Table 1.

Table 1 — Tests: methods, application, requirements

§ No.	Tests						Requirements (and/or particulars)
	Description	EN 3475- and additional details, if any	Qualification ^a (see § 7.1)	Each delivery		Periodic (see § 7.2.4)	
				On all cables (see § 7.2.1 and 7.2.2)	Prior to delivery (see § 7.2.1 and 7.2.3)		
6	Test conditions	100	X	X	X	X	
6.1	Visual examination	201	3	X			Marking: according § 8
6.2	Mass	202	3		X		Minimum length: 0,5 m
6.3	Dimensions (all) – outer diameter	203	3	X	X		Conductor: EN 2083 unless otherwise specified Product standard
6.4	Ohmic resistance per unit length	301	3		X		Product standard
6.5	Voltage proof test: immersion test dry test or dry impulse test (Alternative to dry test)	302	3	X X			2,5 kV r.m.s. 5 kV r.m.s. 8 kV peak voltage
6.6	Insulation resistance at 20 ± 2 °C at 95 ± 2 °C	303	3		X	X	For a length of 1 km: 1 500 M \square minimum 15 M \square minimum
6.7	Surface resistance	304	3				Minimum: 1 250 M \square mm
6.8	Overload resistance	305 T1 and T2: product standard	3			X	Applicable to cable of 0,6 mm ² only
6.9	Continuity of conductors	306	1	X			
6.10	Corona extention voltage	307					Not applicable

(continued)

Table 1 — Tests: methods, application, requirements (continued)

§ No.	Tests						Requirements (and/or particulars)
	Description	EN 3475- and additional details, if any	Qualification ^a (see § 7.1)	Each delivery		Periodic (see § 7.2.4)	
				On all cables (see § 7.2.1 and 7.2.2)	Prior to delivery (see § 7.2.1 and 7.2.3)		
6.11	Accelerated ageing	401 Mandrel diameter and test load: Table 4 Temperature: product standard	3			X	
6.12	Shrinkage and delamination	402 Temperature: product standard	3		X		Product standard
6.13	Delamination and blocking	403 Mandrel diameter: Table 4 Temperature: product standard	3		X		
6.14	Thermal shock	404 Temperature: product standard	3	X			Product standard
6.15	Bending at ambient temperature	405 Mandrel diameter: Table 4	3				
6.16	Cold bend test	406 Mandrel diameter and test load: Table 4	3			X	
6.17	Flammability	407	3			X	Product standard
6.18	Fire resistance	408					Not applicable
6.19	Air-excluded ageing	409 Temperature and time: product standard	3			X	
6.20	Thermal endurance	410	X				Product standard Applicable to cable of 0,6 mm ² only
6.21	Resistance to fluids	411	1/fluid			X	Applicable to cable of 0,6 mm ² only
6.22	Humidity resistance	412 if method B: temperature and time: product standard	3			X	Method A or B as requested in product standard

(continued)

Table 1 — Tests: methods, application, requirements (continued)

§ No.	Tests						Requirements (and/or particulars)
	Description	EN 3475- and additional details, if any	Qualification ^a (see § 7.1)	Each delivery		Periodic (see § 7.2.4)	
				On all cables (see § 7.2.1 and 7.2.2)	Prior to delivery (see § 7.2.1 and 7.2.3)		
6.23	Wrap back test	413	3		X	X	Applicable to cables ≤ 5 mm ²
6.24	Differential scanning calorimeter (DSC test)	414	3			X	
6.25	Rapid change of temperature	415					Not applicable
6.26	Thermal stability	416					Not applicable
6.27	Dynamic cut-through	501 (for insulation wall thickness □ 0,38 mm)	3			X	Product standard (arithmetic mean value of eight tests per specimen)
6.28	Notch propagation	502 Cut depth: product standard	3			X	
6.29	Scrape abrasion	503 Load: product standard	3			X	Product standard (requirements to be considered at 20 °C unless otherwise specified)
6.30	Torsion	504 Test load: Table 4 T3 and T4: product standard	3			X	Applicable to cables □ 5 mm ²
6.31	Tensile test on conductors and strands	505	3		X		EN 2083 unless otherwise specified
6.32	Plating continuity	506	3		X		
6.33	Adherence of plating	507	3		X		
6.34	Plating thickness	508	3		X		EN 2083 unless otherwise specified
6.35	Solderability	509	3		X		Product standard
6.36	Tensile strength and elongation of extruded insulation, sheath and jacket material	510	4		X		Product standard

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