



# SLOVENSKI STANDARD SIST EN 3475-303:2004

01-maj-2004

## Aerospace series - Cables, electrical, aircraft use - Test methods - Part 303: Insulation resistance

Aerospace series - Cables, electrical, aircraft use - Test methods - Part 303: Insulation resistance

Luft- und Raumfahrt - Elektrische Leitungen für Luftfahrt, Verwendung - Prüfverfahren - Teil 303: Isolationswiderstand

Série aérospatiale - Câbles électriques a usage aéronautique - Méthodes d'essai - Partie 303: Résistance d'isolement

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Ta slovenski standard je istoveten z: EN 3475-303:2002

### ICS:

49.060 Štejni sistemski inženiring in oprema za letalstvo  
Aerospace electric equipment and systems

SIST EN 3475-303:2004

en

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 3475-303**

January 2002

ICS 49.060

English version

**Aerospace series - Cables, electrical, aircraft use - Test  
methods - Part 303: Insulation resistance**

Série aérospatiale - Câbles électriques à usage  
aéronautique - Méthodes d'essai - Partie 303: Résistance  
d'isolement

Luft- und Raumfahrt - Elektrische Leitungen für Luftfahrt,  
Verwendung - Prüfverfahren - Teil 303:  
Isolationswiderstand

This European Standard was approved by CEN on 5 August 2001.

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 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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

**Management Centre: rue de Stassart, 36 B-1050 Brussels**

## Foreword

This document (EN 3475-303:2002) has been prepared by the European Association of Aerospace Manufacturers (AECMA).

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 July 2002, and conflicting national standards shall be withdrawn at the latest by July 2002.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard : Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

## 1 Scope

This standard specifies a method of measuring the insulation resistance of finished cables.

It shall be used together with EN 3475-100.

## 2 Normative references

This European Standard incorporates by dated or undated reference provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

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

## 3 Preparation of specimens

The specimens, of at least 10 m length, shall be taken from finished cables.

The solution used for the immersion test shall have the following composition:

- sodium chloride 30 g;
- distilled water 1 000 g;
- wetting agent 2 g.

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## 4 Immersion test

The specimens shall be immersed in the solution defined in 3 with their ends protruding at least 150 mm.

The immersed length L shall be known and shall exceed 10 m.

After one hour's immersion at test temperature  $(20 \pm 2) ^\circ\text{C}$  and  $(95 \pm 2) ^\circ\text{C}$ , a voltage of between 200 Vd.c. and 500 Vd.c., shall be applied for 1 min as shown below:

- insulated conductor: between solution and conductor;
- screened and jacketed cables: between solution and screen.

The insulation resistance, in  $\text{M}\Omega\cdot\text{km}$  calculated from the formula  $\frac{RL}{1\,000}$  where R is the resistance of L (m) shall be at least equal to:

- insulated conductor: the value stated in the technical specification;
- screened and jacketed cables: the value shown for the jacket in the technical specification.

## 5 Dry test

The insulation resistance shall be measured between each insulated conductor of length L and all the others connected together and to the screen if present. A voltage of between 200 Vd.c. and 500 Vd.c., shall be applied for 1 min at ambient temperature.

The insulation resistance in  $M\Omega.km$  calculated from the formula  $\frac{RL}{1\ 000}$  where R is the resistance of length L (m), shall be at least equal to the value given in the technical specification.

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