



**SLOVENSKI STANDARD  
SIST EN 3475-512:2004**

**01-maj-2004**

**Aerospace series - Cables, electrical, aircraft use - Test methods - Part 512:  
Flexure endurance**

Aerospace series - Cables, electrical, aircraft use - Test methods - Part 512: Flexure endurance

Luft- und Raumfahrt - Elektrische Leitungen für Luftfahrtverwendung - Prüfverfahren - Teil 512: Wechselbiegefestigkeit

Série aérospatiale - Câbles électriques a usage aéronautique - Méthodes d'essais - Partie 512: Résistance a la flexion

<https://standards.iteh.ai/catalog/standards/sist/827d9e16-f8f0-4d6e-a221-1f13e00c64f7/sist-en-3475-512-2004>

**Ta slovenski standard je istoveten z: EN 3475-512:2002**

**ICS:**

49.060 Štejni sistemi in oprema za letalstvo in zrakoplovstvo  
Aerospace electric equipment and systems

**SIST EN 3475-512:2004**

**en**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 3475-512**

June 2002

ICS 49.060

English version

**Aerospace series - Cables, electrical, aircraft use - Test  
methods - Part 512: Flexure endurance**

Série aérospatiale - Câbles électriques à usage  
aéronautique - Méthodes d'essais - Partie 512: Résistance  
à la flexion

Luft- und Raumfahrt - Elektrischen Leitungen für Luftfahrt  
Verwendung - Teil 512: Wechselbiegefestigkeit

This European Standard was approved by CEN on 20 January 2002.

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.

[SIST EN 3475-512:2004](https://standards.iteh.ai/catalog/standards/sist/827d9e16-f8f0-4d6e-a221-1f13e00c64f7/sist-en-3475-512-2004)

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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 3475-512:2002) 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 December 2002, and conflicting national standards shall be withdrawn at the latest by December 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 testing flexure endurance of the cable when it is subjected to alternating flexing.

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 and principle of test

Take specimens of adequate length from a finished cable and install them on apparatus described hereafter.

This test makes it possible to determine the resistance of the cable to cycles of repeated flexing.

With the cable vertical, a cycle is defined by a rotation of 90° left, return to the vertical, rotation of 90° right and return to the vertical.

The damage is detected by conductor breakage and thus an interruption of electrical continuity between the two ends of the tested specimen.

The test is normally performed on gauge 20 cables.

It is carried out at ambient temperature.

## 4 Apparatus and installation of specimens

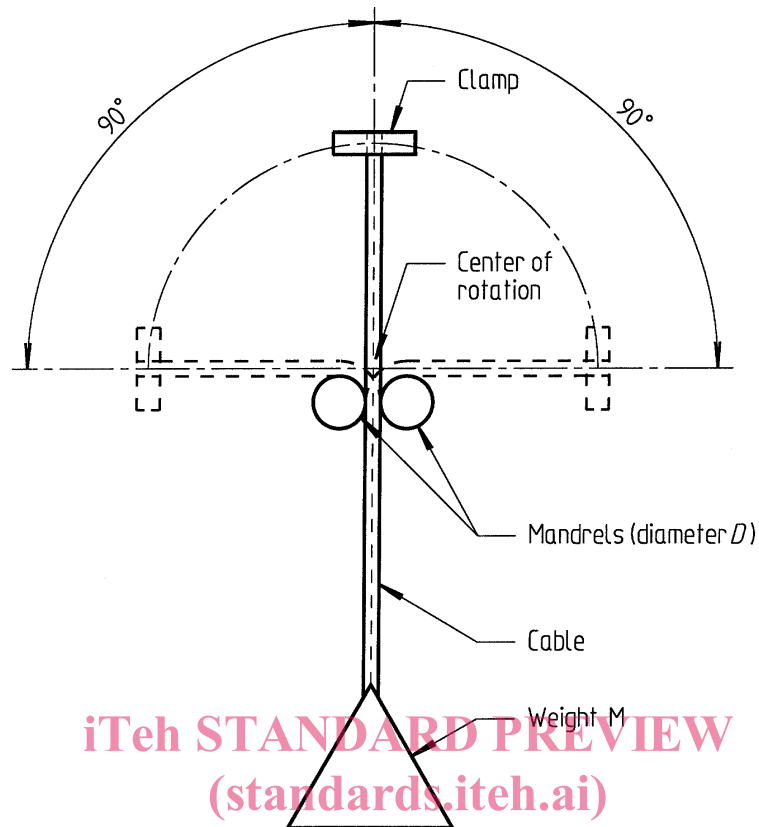
The apparatus is described by the figure 1.

It is fitted with a counter and an automatic stop device controlled by interruption of electrical continuity.

The rotation speed shall be a uniform rate of  $(18 \pm 2)$  cycles/min.

The space between mandrels is equal to the maximum diameter of the tested cable.

The mandrel diameter D and weight M are specified in the product standard.



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**Figure 1**

## 5 Procedure

After installing a specimen and before commencing the full test, perform a preliminary run and if necessary adjust the distance, the mandrels and the attached weight such that possible resonance effects are avoided. For the actual test, actuate the detection circuit, reset the counter and run the machine until auto shut down takes place.

## 6 Requirement

This test shall be performed on a minimum of 3 specimens.

The mean value of this test shall be greater than the value specified in the product standard.

The number of cycles between the beginning of the test and the ending triggered by the detection system shall be greater than the value specified in the product standard.