



SLOVENSKI STANDARD
SIST EN 3745-506:2009

01-oktober-2009

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Aerospace series - Fibres and cables, optical, aircraft use - Test methods - Part 506:
Impact resistance

Luft- und Raumfahrt - Faseroptische Leitungen für Luftfahrzeuge - Prüfverfahren - Teil
506: Fallprüfung

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Série aérospatiale - Fibres et câbles optiques à usage aéronautique - Méthodes d'essais
- Partie 506: Résistance à l'impact

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Ta slovenski standard je istoveten z: **EN 3745-506:2009**

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

EN 3745-506

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2009

ICS 49.060

English Version

Aerospace series - Fibres and cables, optical, aircraft use - Test methods - Part 506: Impact resistance

Série aérospatiale - Fibres et câbles optiques à usage
aéronautique - Méthodes d'essais - Partie 506: Résistance
à l'impact

Luft- und Raumfahrt - Faseroptische Leitungen für
Luftfahrzeuge - Prüfverfahren - Teil 506: Schlagfestigkeit

This European Standard was approved by CEN on 3 July 2009.

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 CEN 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 CEN Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, 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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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (EN 3745-506:2009) has been prepared by the Aerospace and Defence Industries Association of Europe - Standardization (ASD-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 ASD, 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 February 2010, and conflicting national standards shall be withdrawn at the latest by February 2010.

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, Bulgaria, 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 3745-506:2009 (E)**1 Scope**

This standard specifies a method to determine the ability of an optical fibre or cable to withstand impact under specified environmental conditions.

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 2591-100, *Aerospace series — Elements of electrical and optical connection — Test methods — Part 100: General*

EN 3745-100, *Aerospace series — Fibres and cables, optical, aircraft use — Test methods — Part 100: General*

EN 3745-201, *Aerospace series — Fibres and cables, optical, aircraft use — Test methods — Part 201: Visual inspection*

EN 3745-301, *Aerospace series — Fibres and cables, optical, aircraft use — Test methods — Part 301: Attenuation*

EN 187000, *Generic specification: Optical fibre cables*

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3 Preparation of specimens

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3.1 If not at standard test conditions, the specimens shall be subjected to standard test conditions and stabilized at these conditions for 24 h as defined in EN 3745-100. Attenuation should be measured, in accordance with EN 3745-301 method C, before the test.

3.2 Unless otherwise specified in the product standard, the following details shall be as stated in the technical specification:

- a) the temperature at which test is carried out if other than standard;
- b) the number and length of specimens;
- c) the mass of the weight and the drop height, or alternatively the impact energy;
- d) the radius R of the intermediate piece;
- e) the number of impacts;
- f) the permissible change in attenuation after the test.

4 Apparatus

The apparatus shall comprise:

- a) a Light Launch System (LLS) and Light Detector System (LDS) as defined in EN 2591-100;
- b) impact test apparatus as defined in EN 187000 method 505.

The impact test apparatus shall permit a weight to drop vertically onto an intermediate piece of steel which transmits the impact to the cable sample. The sample shall be fixed to a flat substantial steel base.

5 Method

5.1 Procedure

After the cable sample has been mounted in the test apparatus, the attenuation shall be measured as defined in EN 3745-301, method C.

The mass of the weight and the height from which the weight falls be as specified, or if an impact energy is specified shall be adjusted to give the value of impact energy shown.

The number of impacts shall be as specified.

The attenuation shall be measured immediately after the test as defined in EN 3745-301, method C.

5.2 Final measurements and requirements

A visual examination shall be carried out as defined in EN 3745-201.

The attenuation change shall be less than the specified value.

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