



SLOVENSKI STANDARD

SIST EN 3745-515:2012

01-oktober-2012

Aeronavtika - Optična vlakna in kabli za uporabo v zračnih plovilih - Preskusne metode - 515. del: Vtična sila blažilne plasti

Aerospace series - Fibres and cables, optical, aircraft use - Test methods - Part 515: Buffer insertion force

Luft- und Raumfahrt - Faseroptische Leitungen für Luftfahrzeuge - Prüfverfahren - Teil 515: Einsteckkraft der Beschichtung

Série aérospatiale - Fibres et câbles optiques à usage aéronautique - Méthodes d'essais - Partie 515 : Force d'insertion de la gaine intermédiaire

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Ta slovenski standard je istoveten z: EN 3745-515:2012

ICS:

49.060

Letalska in vesoljska
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Aerospace electric
equipment and systems

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EUROPEAN STANDARD

EN 3745-515

NORME EUROPÉENNE

EUROPÄISCHE NORM

July 2012

ICS 49.090

English Version

Aerospace series - Fibres and cables, optical, aircraft use - Test methods - Part 515: Buffer insertion force

Série aérospatiale - Fibres et câbles optiques à usage
aéronautique - Méthodes d'essais - Partie 515: Force
d'insertion de la gaine intermédiaire

Luft- und Raumfahrt - Faseroptische Leitungen für
Luftfahrzeuge - Prüfverfahren - Teil 515: Steckkraft der
Sekundär-Beschichtung

This European Standard was approved by CEN on 23 March 2012.

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-CENELEC 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-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey 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 document (EN 3745-515:2012) 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 January 2013, and conflicting national standards shall be withdrawn at the latest by January 2013.

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 organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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EN 3745-515:2012 (E)**1 Scope**

This European Standard specifies procedures for the practical measurement of the force required to move the buffer a specified distance relative to the outer jacket.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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 2591-601, *Aerospace series — Elements of electrical and optical connection — Test methods — Part 601: Optical elements — Insertion loss*

EN 2591-602, *Aerospace series — Elements of electrical and optical connection — Test methods — Part 602: Optical elements — Variation of attenuation and optical discontinuity*

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

3 Preparation of specimens

3.1 The fibre ends shall be terminated with termini designed for semi-loose structure fibre optic cable.

3.2 The length of fibre to be tested shall be in accordance with the applicable product standard.

3.3 The number of specimens shall be in accordance with the applicable product standard.

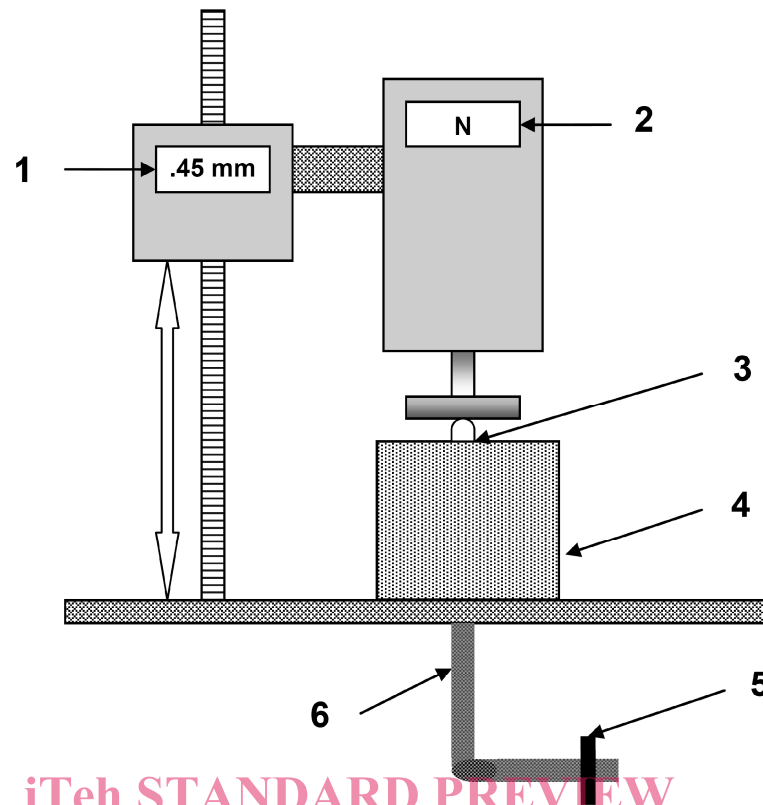
4 Apparatus

4.1 A micrometre with at least 0,1 mm resolution shall be used to measure the buffer movement over the distance specified in the applicable product standard.

4.2 A force gauge with at least 0,1 N resolution, capable of measuring the applicable force required to move the buffer the distance specified in the applicable product standard.

4.3 A mechanical fixture which will hold the terminated specimen in the compression apparatus and not permit any horizontal or vertical movement of the terminus body.

A typical arrangement is shown in Figure 1.



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Key

- 1 Compression distance
- 2 Force applied
- 3 Terminus ferrule
- 4 Terminus fixture
- 5 Clamp
- 6 Fibre optic cable (terminated on one end)

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Figure 1

5 Method

5.1 Procedure

- a) Install the terminus, on both cable ends.
- b) Cut the assembly at the midway point and then clamp the unterminated end with sufficient force to prevent buffer movement.
- c) Attach the terminated end of the cable to the compression apparatus.
- d) Apply sufficient force to compress the ferrule the distance specified in the product standard and record the force required.
- e) Repeat steps c) and d) on the other terminated end of cable assembly.

5.2 Final measurements and requirements

Record the average of the measured force to move the buffer the specified distance on each specimen end. The average shall not exceed the value in the applicable product standard.