



SLOVENSKI STANDARD
SIST EN 3745-505:2007
01-november-2007

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Aerospace series - Fibres and cables, optical, aircraft use - Test methods - Part 505:
Cable tensile strength

Luft- und Raumfahrt - Faseroptische Leitungen für Luftfahrzeuge - Prüfverfahren - Teil
505: Zugfestigkeit

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Série aérospatiale - Fibres et câbles optiques à usage aéronautique - Méthodes d'essais
- Partie 505 : Tenue en traction

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Ta slovenski standard je istoveten z: EN 3745-505:2007

ICS:

49.060 Š^cp\ æš Ą^• [|b\ æ Aerospace electric
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ICS 49.060

English Version

Aerospace series - Fibres and cables, optical, aircraft use - Test
methods - Part 505: Cable tensile strength

Série aérospatiale - Fibres et câbles optiques à usage
aéronautique - Méthodes d'essais - Partie 505 : Tenue en
traction

Luft- und Raumfahrt - Faseroptische Leitungen für
Luftfahrzeuge - Prüfverfahren - Teil 505: Zugfestigkeit

This European Standard was approved by CEN on 23 June 2007.

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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EUROPEAN COMMITTEE FOR STANDARDIZATION
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EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (EN 3745-505:2007) 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 2008, and conflicting national standards shall be withdrawn at the latest by February 2008.

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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1 Scope

This standard specifies a method for measuring the tensile properties of a fibre optic cable.

It shall be used together with EN 3745-100.

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 3745-100, *Aerospace series — Fibres and cables, optical, aircraft use — Test methods — Part 100: General.* ¹⁾

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

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

EN 187000, Method 501, *Generic specification for optical fibre cables.*

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3 Preparation of specimens (standards.iteh.ai)

Prepare test sample in accordance with EN 187000, Method 501.

Sample length can be more than 100 m for test A and 5 m for test B.

4 Apparatus

The apparatus shall comprise:

- Fibre and cable attenuation test apparatus as defined in EN 3745-301;
- Tensile test apparatus in accordance with EN 187000, Method 501(for test A);
- Tensile test apparatus capable of measuring the specified elongation to an accuracy of 1 % (for test B).

1) In preparation at the date of publication of this standard.

5 Method

5.1 General

For measuring cable tensile strength method A or B can be used.

Unless otherwise stated, the test conditions shall be standard atmospheric conditions.

5.2 Method A (using transfer device and chuck drum)

The test shall be carried out in accordance with EN 187000, Method 501.

5.3 Method B (using clamping device)

The cable shall be pulled between two mandrels.

The initial length of the test specimen between the mandrels (min 50 mm diameter) shall be (250 ± 1) mm.

The pulling speed shall be (50 ± 10) mm/mn.

The cable shall be wrapped at least 3 turns on each mandrel.

NOTE There must be sufficient grip between the test specimen and mandrel to avoid relative movement between cable and mandrel during test.

5.4 Final measurements and requirements

If specified the value for the following shall conform to those given in the product standard (see Table 1):

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Table 1

Object	Test Method
Aspect	
Visual examination as defined in EN 3745-201	A and B
Attenuation	
Maximum recorded fibre strain at maximum tensile rating	A
Maximum attenuation change at maximum tensile rating	A and B
Maximum attenuation change before and after test (without load)	A and B
Mechanical characteristics	
Maximum load up to optical discontinuity	A and B
Breaking load for the complete cable	A and B