Aerospace series - Cables, electrical, aircraft use - Test methods - Part 407: Flammability

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NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 3475-407:2009 sisaldab Euroopa standardi EN 3475-407:2009 ingliskeelset teksti.	This Estonian standard EVS-EN 3475-407:2009 consists of the English text of the European standard EN 3475-407:2009.
Standard on kinnitatud Eesti Standardikeskuse 30.10.2009 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.	This standard is ratified with the order of Estonian Centre for Standardisation dated 30.10.2009 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.
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English Version

Aerospace series - Cables, electrical, aircraft use - Test methods - Part 407: Flammability

Série aérospatiale - Câbles électriques à usage aéronautique - Méthodes d'essais - Partie 407 : Tenue à la flamme

Luft- und Raumfahrt - Elektrische Leitungen für Luftfahrtverwendung - Prüfverfahren - Teil 407: Entflammbarkeit

This European Standard was approved by CEN on 20 June 2009.

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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.

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Foreword

This document (EN 3475-407:2009) 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of an identical text or by endorsement, at the latest by February 2010, and conflicting national standards shall be withdrawn at the latest by February 2010.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.

This document supersedes EN 3475-407:2005.

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.

1 Scope

This standard specifies two methods of determining the flammability characteristics of a finished cable.

It is intended to be used together with EN 3475-100.

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 3475-100, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 100: General.*

FAR 25, *Airworthiness standards — Transport category airplanes.*

JAR 25, *Large aeroplanes*.

3 Equipment

The following equipment shall be required for these tests:

a) **Test chamber**: this shall be a chamber measuring not less than 700 mm high × 300 mm wide × 300 mm deep, open at the top, open at the front and situated in a draught-free environment but with sufficient air supply to provide normal combustion. General arrangements are shown in Figures 1 and 2.

b) **Bunsen type gas burner**: the burner shall have a 6 mm inlet, a needle valve in the base for gas adjustment, a nominal bore of 9 mm and a barrel of approximately 100 mm above the air inlets. The gas supply shall be capable of achieving the test requirements defined in 4.1.2 and 4.2.2.

WARNING — NOTE Care should be exercised in setting up and performing this test as toxic fumes may be given off during combustion. The test chamber shall be placed in a fume cabinet that will allow evacuation of gaseous products of combustion at the end of the test.

4 Procedures

4.1 Method 1

4.1.1 Preparation of test specimens

Cut two sets of three specimens each, approximately 900 mm in length, consecutively from the same coil. Strip each end and place them in an atmosphere of (50 ± 5) % relative humidity at a temperature of (21 ± 3) °C for a period of not less than 24 h. Keep the specimens in the conditioning area until just prior to testing.

4.1.2 Flame temperature

4.1.2.1 Adjust the Bunsen burner to produce a flame with an inner blue cone approximately one-third of the overall flame height. Insert a bare copper wire of (0,7 ± 0,025) mm diameter, and having a free length of not less than 100 mm, into the flame, the end of the wire being immediately above the tip of the inner cone.

NOTE For initial setting-up purposes, an overall flame height of approximately 75 mm may be found suitable.