

**SLOVENSKI STANDARD**  
**SIST EN 3475-415:2006**  
**01-julij-2006**

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Aerospace series - Cables, electrical, aircraft use - Test methods - Part 415: Rapid change of temperature

Luft- und Raumfahrt - Elektrische Leitungen für Luftfahrtverwendung - Prüfverfahren -  
Teil 415: Schneller Temperaturwechsel

**iTeh STANDARD PREVIEW**

Série aérospatiale - Câbles électriques à usage aéronautique - Méthodes d'essais -  
Partie 415 : Variation rapide de température

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**ICS:**

49.060

**SIST EN 3475-415:2006**

**en**

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EUROPEAN STANDARD

**EN 3475-415**

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 2005

ICS 49.060

English Version

## Aerospace series - Cables, electrical, aircraft use - Test methods - Part 415: Rapid change of temperature

Série aérospatiale - Câbles électriques à usage aéronautique - Méthodes d'essais - Partie 415 : Variation rapide de température

Luft- und Raumfahrt - Elektrische Leitungen für Luftfahrtverwendung - Prüfverfahren - Teil 415: Schneller Temperaturwechsel

This European Standard was approved by CEN on 12 September 2005.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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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

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## Foreword

This European Standard (EN 3475-415:2005) has been prepared by the European Association of Aerospace Manufacturers - Standardization (AECMA-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 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 April 2006, and conflicting national standards shall be withdrawn at the latest by April 2006.

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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

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## 1 Scope

This product standard defines a test method to evaluate the performance of a coaxial cable after exposure to a rapid change of temperature.

It shall 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*.

EN 3475-801, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 801: Capacitance per unit length*.

EN 3475-806, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 806: Attenuation*.

## 3 Preparation of specimens

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First specimen: length is specified in the product standard.

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Second specimen: length ~~±1,5 m~~ <http://standards.iteh.ai/catalog/standards/sist/1124dcca-3f06-40cc-a678-010a/d58bb4b/sist-en-3475-415-2006>  
(Specimen shall be cut from the specimen unit)

### 3.2 Conditioning

The specimens shall not be bent with a radius less than 30 times overall diameter of the cable, during low or high temperature exposure.

### 3.3 Initial measurement

On first specimen:

- capacitance per unit of length (EN 3475-801);
- attenuation at 200 MHz (EN 3475-806).

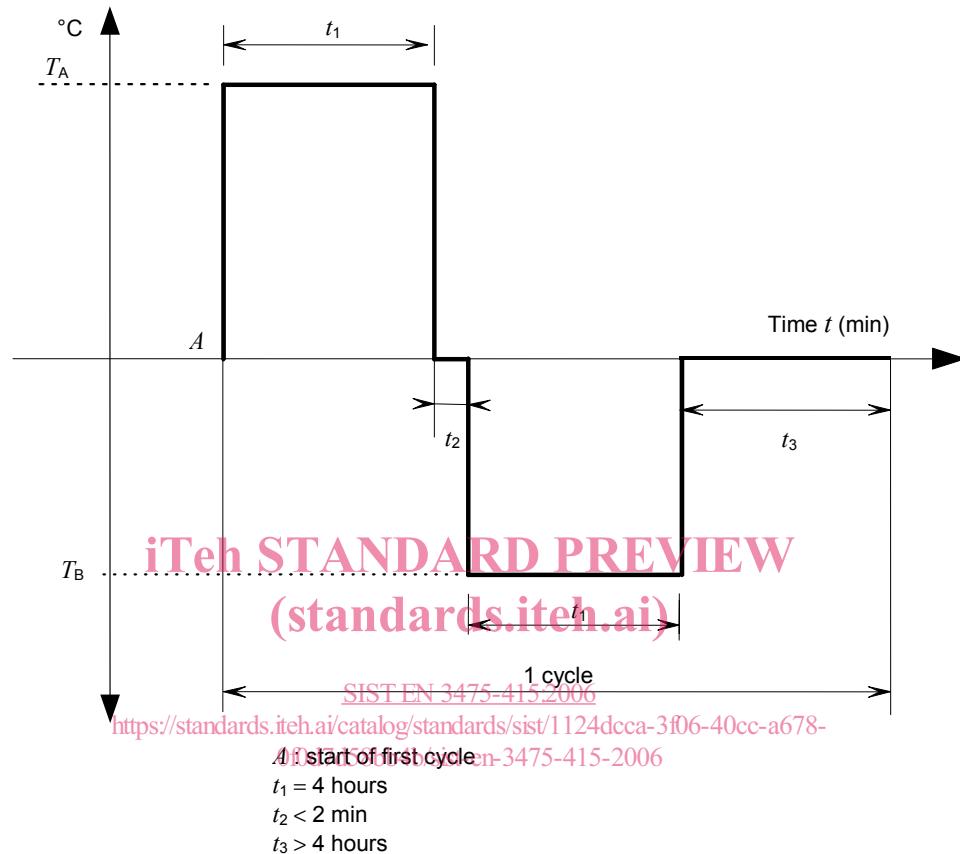
On second specimen:

- measure any difference in length which may exist between the ends of the dielectric and conductor.

## 4 Test method and requirements

### 4.1 Test

The specimen shall be subjected to the following cycle for a total of three cycles.



**Figure 1 — Temperature cycle**

### 4.2 Temperature test requirement

Unless otherwise specified,  $T_A$  and  $T_B$  are the maximum and the minimum operating temperatures defined in the product standard.

After the conditioning period, remove the specimen from the heat chamber and condition at room temperature for four hours minimum.

### 4.3 Final measurement

On first specimen:

- capacitance per unit of length (EN 3475-801);
- attenuation at 200 MHz (EN 3475-806).

On second specimen:

- measurement of both ends of the specimen for shrinkage or expansion of the dielectric relative to the conductor.

## **5 Requirements**

Maximum variation of capacitance as specified in the product standard.

Maximum increase of attenuation as specified in the product standard.

Maximum shrinkage or expansion after temperature cycle, from the initial value, shall be less than the value required in the product standard.

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