

**Aerospace series - Cables, electrical,  
aircraft use - Test methods - Part 601:  
Smoke density**

Aerospace series - Cables, electrical, aircraft use -  
Test methods - Part 601: Smoke density

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 3475-601:2007 sisaldab Euroopa standardi EN 3475-601:2007 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 30.10.2007 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 3475-601:2007 consists of the English text of the European standard EN 3475-601:2007.</p> <p>This document is endorsed on 30.10.2007 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p><b>Käsitlusala:</b></p> <p>This test method is intended for determination of the specific optical density of smoke generated by electrical wire/cable insulation materials due to pyrolytic decomposition under the influence of radiant heat only or with simultaneous flame application. It is used for evaluation of insulation materials of electrical wire/cable used in the interiors of aerospace vehicles but may be utilized in other applications as specified in applicable procurement documents. This standard should be used to measure and describe the properties of products in response to heat and flame under controlled laboratory conditions and should not be used to describe or appraise the fire hazard or fire risk of materials, products, or assemblies under actual fire conditions. However results of this test may be used as elements of a fire risk assessment which takes into account all of the factors which are pertinent to an assessment of the fire hazard of a particular end use.</p>	<p><b>Scope:</b></p> <p>This test method is intended for determination of the specific optical density of smoke generated by electrical wire/cable insulation materials due to pyrolytic decomposition under the influence of radiant heat only or with simultaneous flame application. It is used for evaluation of insulation materials of electrical wire/cable used in the interiors of aerospace vehicles but may be utilized in other applications as specified in applicable procurement documents. This standard should be used to measure and describe the properties of products in response to heat and flame under controlled laboratory conditions and should not be used to describe or appraise the fire hazard or fire risk of materials, products, or assemblies under actual fire conditions. However results of this test may be used as elements of a fire risk assessment which takes into account all of the factors which are pertinent to an assessment of the fire hazard of a particular end use.</p>
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ICS 49.060

**Võtmesõnad:**

ICS 49.060

English Version

## Aerospace series - Cables, electrical, aircraft use - Test methods - Part 601: Smoke density

Série aérospatiale - Câbles électriques à usage  
aéronautique - Méthodes d'essais - Partie 601: Densité de  
fumée

Luft- und Raumfahrt - Elektrische Leitungen für  
Luftfahrzeuge - Prüfverfahren - Teil 601: Rauchdichte

This European Standard was approved by CEN on 21 June 2007.

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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 3475-601:2007) 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.

## 1 Scope

This test method is intended for determination of the specific optical density of smoke generated by electrical wire/cable insulation materials due to pyrolytic decomposition under the influence of radiant heat only or with simultaneous flame application.

It is used for evaluation of insulation materials of electrical wire/cable used in the interiors of aerospace vehicles but may be utilized in other applications as specified in applicable procurement documents.

This standard should be used to measure and describe the properties of products in response to heat and flame under controlled laboratory conditions and should not be used to describe or appraise the fire hazard or fire risk of materials, products, or assemblies under actual fire conditions. However results of this test may be used as elements of a fire risk assessment which takes into account all of the factors which are pertinent to an assessment of the fire hazard of a particular end use.

## 2 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

- 2.1**  
 **$D_s$**   
Specific Optical Density, is a dimensionless measure of the amount of smoke produced per unit area by a material when it is burned
- 2.2**  
 **$D_m$**   
maximum value of  $D_s$ , that occurs during the specified time of a test
- 2.3**  
**F-mode**  
Flaming mode, the pyrolytic decomposition of the specimen under the influence of radiant heat and with simultaneous flame application
- 2.4**  
**NF-mode**  
Non Flaming mode, the pyrolytic decomposition of the specimen under the influence of radiant heat only
- 2.5**  
**T**  
percent light transmission
- 2.6**  
 **$T_t$**   
percent light transmission at the time t
- 2.7**  
 **$T_m$**   
minimum percent light transmission
- 2.8**  
 **$t_{Dm}$**   
time of the test in seconds at which the maximum optical smoke density occurs