# Katsetused materjalide põlemisel kaablitest ja isoleerjuhtmetest eralduvatele gaasidele. Osa 1: Halogeenhappegaasi koguse kindlaksmääramine

Test on gases evolved during combustion of materials from cables - Part 1: Determination of the halogen acid gas content

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

| | |
|---|---|
| See Eesti standard EVS-EN 60754-1:2014 sisaldab Euroopa standardi EN 60754-1:2014 ingliskeelset teksti. | This Estonian standard EVS-EN 60754-1:2014 consists of the English text of the European standard EN 60754-1:2014 . |
| Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas. | This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation. |
| Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 18.04.2014. | Date of Availability of the European standard is 18.04.2014. |
| Standard on kättesaadav Eesti Standardikeskusest. | The standard is available from the Estonian Centre for Standardisation. |



Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 13.220.40; 29.020; 29.060.20

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

# EN 60754-1

April 2014

ICS 13.220.40; 29.020; 29.060.20

Supersedes EN 50267-1:1998 (partially), EN 50267-2-1:1998 (partially), EN 50267-2-2:1998 (partially), EN 50267-2-3:1998 (partially)

English version

## Test on gases evolved during combustion of materials from cables - Part 1: Determination of the halogen acid gas content

(IEC 60754-1:2011 + corrigendum Nov. 2013)

Essai sur les gaz émis lors de la combustion des matériaux prélevés sur câbles -
Partie 1: Détermination de la quantité de gaz acide halogéné
(CEI 60754-1:2011 + corrigendum Nov. 2013)

Prüfung der bei der Verbrennung der Werkstoffe von Kabeln und isolierten Leitungen entstehenden Gase -
Teil 1: Bestimmung des Gehaltes an Halogenwasserstoffsäure
(IEC 60754-1:2011 + Corrigendum Nov. 2013)

This European Standard was approved by CENELEC on 2014-01-27. CENELEC 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.

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CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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Ref. No. EN 60754-1:2014 E

## Foreword

This document (EN 60754-1:2014) consists of the text of IEC 60754-1:2011 + corrigendum November 2013, prepared by IEC/TC 20 "Electric cables".

The following dates are fixed:

| | | |
|---|---|---|
| • latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement | (dop) | 2015-01-27 |
| • latest date by which the national standards conflicting with the document have to be withdrawn | (dow) | 2017-01-27 |

This document supersedes EN 50267-1:1998 (PART), EN 50267-2-1:1998 (PART), EN 50267-2-2:1998 (PART) and EN 50267-2-3:1998 (PART).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

This standard covers the Principle Elements of the Safety Objectives for Electrical Equipment Designed for Use within Certain Voltage Limits (LVD - 2006/95/EC).

## Endorsement notice

The text of the International Standard IEC 60754-1:2011 + corrigendum November 2013 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated :

| | | |
|---|---|---|
| IEC 60684-2 | NOTE | Harmonized as EN 60684-2. |

## Annex ZA
(normative)

## Normative references to international publications with their corresponding European publications

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.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

| Publication | Year | Title | EN/HD | Year |
|---|---|---|---|---|
| ISO 385 | - | Laboratory glassware - Burettes | EN ISO 385 | - |
| ISO 1042 | - | Laboratory glassware - One-mark volumetric flasks | EN ISO 1042 | - |
| ISO 3696 | - | Water for analytical laboratory use - Specification and test methods | EN ISO 3696 | - |

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# INTRODUCTION

IEC 60754 consists of the following parts, under the general title *Test on gases evolved during combustion of materials from cables*:

– *Part 1: Determination of the halogen acid gas content*

– *Part 2: Determination of acidity (by pH measurement) and conductivity*

IEC 60754-1 was developed due to concerns expressed by cable users over the amount of acid gas which is evolved when some cable insulating, sheathing and other materials are burned, as this acid can cause extensive damage to electrical and electronic equipment not involved in the fire itself.

This standard provides a method for determining the amount of acid gases evolved by burning cable components so that limits can be agreed for cable specifications. As the test is not carried out on a complete cable test piece, for a hazard assessment the actual material volumes of the cable components should be taken into consideration.

# TEST ON GASES EVOLVED DURING COMBUSTION OF MATERIALS FROM CABLES –

# Part 1: Determination of the halogen acid gas content



## 1 Scope

This part of IEC 60754 specifies the apparatus and procedure for the determination of the amount of halogen acid gas, other than hydrofluoric acid, evolved during the combustion of compounds based on halogenated polymers and compounds containing halogenated additives taken from electric or optical fibre cable constructions.

NOTE 1 This test method is not able to determine hydrofluoric acid. A suitable method may be found in IEC 60684-2.

NOTE 2 This test method may be used to test materials to be used in cable manufacture, but a declaration of cable performance should not be made based on such a test.

NOTE 3 The relevant cable standard should indicate which components of the cable should be tested.

NOTE 4 For the purposes of this standard, the term “electric cable” covers all insulated metallic conductor cables used for the conveyance of energy or signals.

The method specified in this standard is intended for the testing of individual components used in a cable construction. The use of this method will enable the verification of requirements which are stated in the appropriate cable specification for individual components of a cable construction.

NOTE 5 By agreement between the producer and purchaser, the methodology given in this standard may be used to test combinations of materials representing a cable construction, but a declaration of cable performance to this standard should not be made based on such a test. Information on such a method is given in Annex A.

For reasons of precision this method is not recommended for reporting values of halogen acid evolved less than 5 mg/g of the sample taken.

## 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.

ISO 385, *Laboratory glassware – Burettes*

ISO 1042, *Laboratory glassware – One-mark volumetric flasks*

ISO 3696, *Water for analytical laboratory use – Specification and test methods*

## 3 Terms and definitions

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

**3.1**
**halogen acid gas content**

amount of halogen acid gas evolved, except hydrofluoric acid, expressed as milligrams of hydrochloric acid per gram of total test specimen