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NSAI Standards

Irish Standard
I.S. EN 13501-6:2018

Fire classification of construction products and building elements - Part 6: Classification using data from reaction to fire tests on power, control and communication cables

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National Foreword

I.S. EN 13501-6:2018 is the adopted Irish version of the European Document EN 13501-6:2018, Fire classification of construction products and building elements - Part 6: Classification using data from reaction to fire tests on power, control and communication cables

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 13501-6

December 2018

ICS 13.220.50; 29.060.20

Supersedes EN 13501-6:2014

English Version

Fire classification of construction products and building elements - Part 6: Classification using data from reaction to fire tests on power, control and communication cables

Classement au feu des produits et éléments de construction - Partie 6: Classement à partir des données d'essais de réaction au feu sur câbles de puissance, de commande et de communication

Klassifizierung von Bauprodukten und Bauarten zu ihrem Brandverhalten - Teil 6: Klassifizierung mit den Ergebnissen aus den Prüfungen zum Brandverhalten von Starkstromkabeln und -leitungen, Steuer- und Kommunikationskabeln

This European Standard was approved by CEN on 9 November 2018.

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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-CENELEC Management Centre has the same status as the official versions.

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Contents

Page

European foreword 4
Introduction 5
1 Scope 6
2 Normative references 6
3 Terms, definitions and symbols 6
3.1 Terms and definitions 6
3.2 Symbols and abbreviations 10
4 Classes of reaction to fire performance 10
5 Test methods 10
5.1 General 10
5.2 Heat of combustion test (EN ISO 1716) 11
5.3 Vertical flame spread of single cable (EN 60332-1-2) 11
5.4 Burning behaviour and smoke production of bunched cable – (EN 50399) 11
5.5 Smoke production of burning cable (EN 61034-2) 11
5.6 Acidity of gases produced by burning cables (EN 60754-2) 11
6 Principles for specimen preparation 11
7 Number of tests for classification 11
7.1 Minimum number of tests 11
7.2 Additional tests 12
7.3 Criteria for classification 12
7.4 Continuous parameters 12
7.5 Discontinuous parameters 12
8 Testing of electric cables (see Table 1) 13
8.1 Class E_{ca}, F_{ca} 13
8.2 Classes D_{ca}, C_{ca}, $B2_{ca}$ 13
8.3 Class $B1_{ca}$ 13
8.4 Class A_{ca} 13
8.5 Additional classifications s1, s2, s3 for smoke production 13
8.6 Additional classifications s1a, s1b for smoke production 13
8.7 Additional classifications d0, d1, d2 for flaming droplets/particles 13
8.8 Additional classifications a1, a2, a3 for acidity 13
9 Classification criteria for electric cables (see Table 1) 14
9.1 General 14
9.2 Class F_{ca} 14
9.3 Class E_{ca} 14
9.4 Class D_{ca} 14
9.5 Class C_{ca} 15
9.6 Class $B2_{ca}$ 15
9.7 Class $B1_{ca}$ 15
9.8 Class A_{ca} 16
9.9 Additional classifications s1, s1a, s1b, s2, s3 for smoke production 16
9.10 Additional classifications d0, d1, d2 for flaming droplets and/or particles 17

This is a free page sample. Access the full version online.

9.11 Additional classifications a1, a2, a3 for acidity **17**

10 Presentation of classification **17**

11 Field of application of the classification **20**

12 Classification report **20**
12.1 General **20**
12.2 Content and format **20**

Annex A (normative) **Reaction to fire classification report for electric cables** **23**

A.1 Introduction **23**

A.2 Details of classified product **24**

A.3 Reports and results in support of this classification **24**

A.4 Classification and field of application **25**

A.5 Limitations **26**

Annex B (informative) **Background information as regards the reaction to fire performance of cables** **27**

B.1 General **27**

B.2 Assumptions **27**

B.3 Reference scenario and fire situations for cables **27**

Bibliography **30**

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European foreword

This document (EN 13501-6:2018) has been prepared by Technical Committee CEN/TC 127 "Fire safety in buildings", the secretariat of which is held by BSI.

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 June 2019, and conflicting national standards shall be withdrawn at the latest by September 2020.

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

This document supersedes EN 13501-6:2014.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

CEN, CENELEC and EOTA committees preparing technical specifications for electric cables falling under the Construction Product Regulation (305/2011), which contain performance requirements against reaction to fire tests, should make reference to the reaction to fire classification given in this European Standard and not refer directly to any specific fire test method.

This document has been prepared in cooperation with CLC/TC 20 "Electric cables", CLC/TC 46X "Communication cables" and CLC/TC 86A "Optical fibre cables".

EN 13501, *Fire classification of construction products and building elements* consists of the following parts:

— *Part 1: Classification using data from reaction to fire tests;*

— *Part 2: Classification using data from fire resistance tests, excluding ventilation services;*

— *Part 3: Classification using data from fire resistance tests on products and elements used in building service installations: fire resisting ducts and fire dampers;*

— *Part 4: Classification using data from fire resistance tests on components of smoke control systems;*

— *Part 5: Classification using data from external fire exposure to roofs tests;*

— *Part 6: Classification using data from reaction to fire tests on power, control and communication cables.*

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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Introduction

The aim of this European Standard is to define a harmonized procedure for the classification of reaction to fire of power, control and communication cables and hybrid cables. This classification is based on the test procedures listed in Clause 5.

This European Standard has been prepared in support of the second essential requirement in the EC Construction Products Regulation (CPR) (EU) N°305/2011 and as detailed in the Interpretative Document Number 2: Safety in case of fire (OJ C62 Vol. 37).

Background information on the Commission Decision regarding the classification of the reaction to fire performance of electric cables is given in Annex B.

There is a procedure by which certain products can be assigned a particular fire classification without the need for testing. Such products have well established reaction to fire performance and have been agreed by the Standing Committee on Construction. Agreements relating to such products which may be 'classified without further testing' (CWFT) are published in the Official Journal of the EC.

Part 1 of this European Standard covers classification resulting from reaction to fire tests for products other than electric cables.

Parts 2, 3 and 4 of this European Standard are concerned with classification resulting from fire resistance tests.

Part 5 covers classification resulting from tests for external fire exposure to roofs.

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1 Scope

This document provides the reaction to fire classification procedure for electric cables.

NOTE For the purpose of this document, the term "electric cables" covers all power, control and communication cables, including optical fibre cables.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 50399, *Common test methods for cables under fire conditions - Heat release and smoke production measurement on cables during flame spread test - Test apparatus, procedures, results*

EN 50575, *Power, control and communication cables - Cables for general applications in construction works subject to reaction to fire requirements*

CLC/TS 50576, *Electric cables - Extended application of test results for reaction to fire*

EN 60332-1-2:2004, *Tests on electric and optical fibre cables under fire conditions - Part 1-2: Test for vertical flame propagation for a single insulated wire or cable - Procedure for 1 kW pre-mixed flame (IEC 60332-1-2:2004)*

EN 60754-2, *Test on gases evolved during combustion of materials from cables - Part 2: Determination of acidity (by pH measurement) and conductivity (IEC 60754-2)*

EN 61034-2, *Measurement of smoke density of cables burning under defined conditions - Part 2: Test procedure and requirements (IEC 61034-2)*

EN ISO 1716, *Reaction to fire tests for products - Determination of the gross heat of combustion (calorific value) (ISO 1716)*

3 Terms, definitions and symbols

3.1 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at http://www.electropedia.org/
- ISO Online browsing platform: available at http://www.iso.org/obp

3.1.1
product
material, element or component about which information is required, in the context of this standard, the product is an electric cable about which information is required

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