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Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 03/16

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 45545-2:2013+A1

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ICS 45.060.01; 13.220.20

Supersedes EN 45545-2:2013

English Version

Railway applications - Fire protection on railway vehicles - Part 2: Requirements for fire behaviour of materials and components

Applications ferroviaires - Protection contre les incendies dans les véhicules ferroviaires - Partie 2: Exigences du comportement au feu des matériaux et des composants

Bahnanwendungen - Brandschutz in Schienenfahrzeugen - Teil 2: Anforderungen an das Brandverhalten von Materialien und Komponenten

This European Standard was approved by CEN on 7 December 2012 and includes Amendment 1 approved by CEN on 14 August 2015.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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European foreword

This document (EN 45545-2:2013+A1:2015) has been prepared by Technical Committee CEN/TC 256 “Railway applications”, the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by April 2016, and conflicting national standards shall be withdrawn at the latest by April 2016.

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 includes Amendment 1 approved by CEN on 2015-08-14.

This document supersedes ▌A1⟩ EN 45545-2:2013 ⟨A1▌.

The start and finish of text introduced or altered by amendment is indicated in the text by tags ▌A1⟩ ⟨A1▌.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive 2008/57/EC.

For relationship with EU Directive 2008/57/EC, see informative Annex ZA, which is an integral part of this document.

This series of European standards *Railway applications — Fire protection on railway vehicles* consists of:

— Part 1: General;

— Part 2: Requirements for fire behaviour of materials and components;

— Part 3: Fire resistance requirements for fire barriers;

— Part 4: Fire safety requirements for railway rolling stock design;

— Part 5: Fire safety requirements for electrical equipment including that of trolley buses, track guided buses and magnetic levitation vehicles;

— Part 6: Fire control and management systems;

— Part 7: Fire safety requirements for flammable liquid and flammable gas installations.

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, 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, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

EN 45545-2 has been developed from existing fire safety regulations for railway vehicles from the International Union of Railways (UIC) and different European countries.

In using the operation and design categories defined in EN 45545-1, the requirements laid down in this part take into account the current operating conditions for European public rail transport.

1 Scope

This part of EN 45545 specifies the reaction to fire performance requirements for materials and products used on railway vehicles as defined in EN 45545-1.

The operation and design categories defined in EN 45545-1 are used to establish hazard levels that are used as the basis of a classification system.

For each hazard level, this part specifies the test methods, test conditions and reaction to fire performance requirements.

It is not within the scope of this European Standard to describe measures that ensure the preservation of the vehicles in the event of a fire.

2 Normative references

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.

EN 13238, *Reaction to fire tests for building products — Conditioning procedures and general rules for selection of substrates*

EN 13501-1, *Fire classification of construction products and building elements — Part 1: Classification using data from reaction to fire tests*

EN 45545-1:2013, *Railway applications — Fire protection on railway vehicles — Part 1: General*

EN 45545-3, *Railway applications — Fire protection on railway vehicles — Part 3: Fire resistance requirements for fire barriers*

▌A1⟩ EN 45545-5:2013+A1:2015 ⟨A1▌, *Railway applications — Fire protection on railway vehicles — Part 5: Fire safety requirements for electrical equipment including that of trolley buses, track guided buses and magnetic levitation vehicles*

EN 50305:2002, *Railway applications — Railway rolling stock cables having special fire performance — Test methods*

EN 50306, *Railway applications — Railway rolling stock cables having special fire performance*

EN 50264, *Railway applications — Railway rolling stock power and control cables having special fire performance*

EN 50382, *Railway applications — Railway rolling stock high temperature power cables having special fire performance*

EN 60332-1-2, *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*

EN 60332-3-24, *Tests on electric and optical fibre cables under fire conditions — Part 3-24: Test for vertical flame spread of vertically-mounted bunched wires or cables — Category C*

EN 60584-1, *Thermocouples — Part 1: Reference tables*

EN 60695-2-11, *Fire hazard testing — Part 2-11: Glowing/hot-wire based test methods — Glow-wire flammability test method for end-products*

EN 60695-11-10, *Fire hazard testing — Part 11-10: Test flames — 50 W horizontal and vertical flame test methods*

EN 61034-1, *Measurement of smoke density of cables burning under defined conditions — Part 1: Test apparatus*

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

EN ISO 1182, *Reaction to fire tests for products — Non-combustibility test (ISO 1182)*

EN ISO 1716:2010, *Reaction to fire tests for products — Determination of the gross heat of combustion (calorific value) (ISO 1716:2010)*

EN ISO 4589-2, *Plastics — Determination of burning behaviour by oxygen index — Part 2: Ambient-temperature test (ISO 4589-2)*

EN ISO 5659-2, *Plastics — Smoke generation — Part 2: Determination of optical density by a single-chamber test (ISO 5659-2)*

EN ISO 6507-3, *Metallic materials — Vickers hardness test — Part 3: Calibration of reference blocks (ISO 6507-3)*

EN ISO 9239-1, *Reaction to fire tests for floorings — Part 1: Determination of the burning behaviour using a radiant heat source (ISO 9239-1)*

EN ISO 11925-2, *Reaction to fire tests — Ignitability of products subjected to direct impingement of flame — Part 2: Single-flame source test (ISO 11925-2)*

EN ISO 12952-2, *Textiles — Assessment of the ignitability of bedding items — Part 2: Ignition source: match-flame equivalent (ISO 12952-2)*

ISO 5658-2:2006, *Reaction to fire tests — Spread of flame — Part 2: Lateral spread on building and transport products in vertical configuration*

ISO 5660-1, *Reaction-to-fire tests — Heat release, smoke production and mass loss rate — Part 1: Heat release rate (cone calorimeter method)*

ISO/TR 9705-2, *Reaction-to-fire tests — Full-scale room tests for surface products — Part 2: Technical background and guidanceISO 11054, Cutting tools — Designation of high-speed steel groups*

ISO 19702, *Toxicity testing of fire effluents — Guidance for analysis of gases and vapours in fire effluents using FTIR gas analysis*

ISO 2592, *Determination of flash and fire points — Cleveland open cup method*

ISO 2719, *Determination of flash point — Pensky-Martens closed cup method*

NF X70-100-1, *Fire tests — Analysis of gaseous effluents — Part 1: methods for analysing gases stemming from thermal degradation*

NF X70-100-2, *Fire tests — Analysis of gaseous effluents — Part 2: tubular furnace thermal degradation method*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN