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Railway applications - Fire protection on railway
vehicles - Part 6: Fire control and management
systems

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>See Eesti standard EVS-EN 45545-6:2024 sisaldab Euroopa standardi EN 45545-6:2024 ingliskeelset teksti.</p> <p>Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 20.11.2024.</p> <p>Standard on kättesaadav Eesti Standardimis- ja Akrediteerimiskeskusest.</p>	<p>This Estonian standard EVS-EN 45545-6:2024 consists of the English text of the European standard EN 45545-6:2024.</p> <p>This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.</p> <p>Date of Availability of the European standard is 20.11.2024.</p> <p>The standard is available from the Estonian Centre for Standardisation and Accreditation.</p>
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ICS 13.220.20, 45.060.01

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EUROPEAN STANDARD

EN 45545-6

NORME EUROPÉENNE

EUROPÄISCHE NORM

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ICS 13.220.20; 45.060.01

Supersedes EN 45545-6:2013

English Version

Railway applications - Fire protection on railway vehicles - Part 6: Fire control and management systems

Applications ferroviaires - Protection contre les incendies dans les véhicules ferroviaires - Partie 6 : Systèmes de gestion et de contrôle des incendies

Bahnanwendungen - Brandschutz in Schienenfahrzeugen - Teil 6: Brandmelde- und Brandbekämpfungseinrichtungen und begleitende Brandschutzmaßnahmen

This European Standard was approved by CEN on 26 August 2024.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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European foreword

This document (EN 45545-6:2024) 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of an identical text or by endorsement, at the latest by May 2025, and conflicting national standards shall be withdrawn at the latest by May 2025.

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 45545-6:2013.

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.

The main changes from EN 45545-6:2013 are:

- addition of “Lithium ion batteries for main auxiliary supplies” in Table 1;
- deletion of footnote c for S and DS categories in Table 1;
- modification of 5.3.1;
- modification of 5.3.3;
- new requirements in 6.3.1;
- new requirements in 6.3.3;
- deletion of Clause 8.

This document has been prepared under a standardization request addressed to CEN by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

For the relationship with EU Legislation, see informative Annex ZA, which is an integral part of this document.

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

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Introduction

EN 45545-6 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 specified in EN 45545-1:2013, the requirements laid down in this part take into account the current operating conditions for European public rail transport.

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1 Scope

This document specifies requirements for fire detection, alarm systems, equipment shutdown, information and communication systems, emergency brake systems and fire fighting systems to cover the objectives specified in EN 45545-1:2013.

The measures and requirements specified in this document aim to protect passengers and staff in railway vehicles in the event of a fire on board by alerting staff and passengers to a fire, delaying the fire development and controlling the movement of smoke.

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

This document is applicable to railway vehicles specified in EN 45545-1:2013.

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 2:1992,¹ *Classification of fires*

EN 3-7:2004+A1:2007, *Portable fire extinguishers - Part 7: Characteristics, performance requirements and test methods*

EN 3-8:2021, *Portable fire extinguishers - Part 8: Requirements for the construction, pressure resistance and mechanical tests for extinguishers with a maximum allowable pressure equal to or lower than 30 bar, which comply with the requirements of EN 3-7*

EN 3-9:2006,² *Portable fire extinguishers — Part 9: Additional requirements to EN 3-7 for pressure resistance of CO₂ extinguishers*

EN 3-10:2009, *Portable fire extinguishers - Part 10: Provisions for evaluating the conformity of a portable fire extinguisher to EN 3-7*

EN 54-3:2014+A1:2019, *Fire detection and fire alarm systems - Part 3: Fire alarm devices - Sounders*

EN 54-23:2010, *Fire detection and fire alarm systems - Part 23: Fire alarm devices - Visual alarm devices*

EN 1869:2019, *Fire blankets*

EN 16334-1:2014+A1:2022, *Railway applications - Passenger Alarm System - Part 1: System requirements for mainline rail*

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

EN 45545-2:2020+A1:2023, *Railway applications - Fire protection on railway vehicles - Part 2: Requirements for fire behaviour of materials and components*

¹ As impacted by EN 2:1992/A1:2004.

² As impacted by EN 3-9:2006/AC:2007.

EN 45545-3:2024, *Railway applications - Fire protection on railway vehicles - Part 3: Fire resistance requirements for fire barriers*

EN 50553:2012,³ *Railway applications — Requirements for running capability in case of fire on board of rolling stock*

EN 61310-1:2008, *Safety of machinery - Indication, marking and actuation - Part 1: Requirements for visual, acoustic and tactile signals*

3 Terms and definitions

For the purposes of this document the terms and definitions given in EN 45545-1:2013 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>

4 General requirements

The design, construction or assembly of components which are critical for fire safety, e.g. for fire detection and for fire fighting, shall comply with the objectives in EN 45545-1:2013.

All passenger vehicles shall be fitted with a passenger alarm system to inform on-board staff and/or control centre staff about a possible fire detected by a passenger.

All passenger vehicles shall be equipped with a passenger alarm system that provides a means of conveying information to passengers from on-board staff or control centre staff.

NOTE For architecture of passenger alarm system refer to EN 16334-1:2014+A1:2022.

Fire barrier doors for passenger use shall be of the self-closing type. Fire barrier doors have to be compliant with EN 45545-3:2024.

Powered fire barrier doors for passenger use shall stop in a closed position when a fire is detected in one of the adjacent areas (automatic or manual detection).

³ As impacted by EN 50553:2012/AC:2013, EN 50553:2012/A1:2016 and EN 50553:2012/A2:2020.