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RAUDTEEVEEREMI PROJEKTEERIMISEL

Railway applications - Fire protection on railway
vehicles - Part 4: Fire safety requirements for rolling
stock design

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>See Eesti standard EVS-EN 45545-4:2024 sisaldab Euroopa standardi EN 45545-4:2024 ingliskeelset teksti.</p> <p>Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 07.03.2024.</p> <p>Standard on kättesaadav Eesti Standardimis-ja Akrediteerimiskeskusest.</p>	<p>This Estonian standard EVS-EN 45545-4:2024 consists of the English text of the European standard EN 45545-4:2024.</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 07.03.2024.</p> <p>The standard is available from the Estonian Centre for Standardisation and Accreditation.</p>
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English Version

**Railway applications - Fire protection on railway vehicles -
Part 4: Fire safety requirements for rolling stock design**

Applications ferroviaires - Protection contre les
incendies dans les véhicules ferroviaires - Partie 4 :
Exigences de sécurité incendie pour la conception des
véhicules ferroviaires

Bahnanwendungen - Brandschutz in
Schienenfahrzeugen - Teil 4:
Brandschutzanforderungen an die konstruktive
Gestaltung von Schienenfahrzeugen

This European Standard was approved by CEN on 22 October 2023.

CEN 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. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

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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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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European foreword

This document (EN 45545-4:2024) 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 August 2024, and conflicting national standards shall be withdrawn at the latest by August 2024.

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 45545-4:2013.

The main changes from EN 45545-4:2013 are:

- new requirements on 4.2.3;
- suppression of 4.2.6;
- new requirements on 4.3.2.1;
- new requirements on 4.3.3.1;
- addition of 4.3.5 and 4.3.6.

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.

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.

Introduction

EN 45545-4 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 fire safety requirements for railway vehicle design 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 minimizing the risk of a fire starting, delaying the fire development and controlling the spread of fire products through the railway vehicle, thus aiding evacuation.

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

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 13272-1:2019, *Railway applications — Electrical lighting for rolling stock in public transport systems — Part 1: Heavy rail*

EN 13272-2:2019, *Railway applications — Electrical lighting for rolling stock in public transport systems — Part 2: Urban rail*

EN 14752:2019+A1:2021, *Railway applications — Bodyside entrance systems for rolling stock*

EN 15663:2017+A1:2018, *Railway applications — Vehicle reference masses*

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

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

EN 45545-6:2013, *Railway applications — Fire protection on railway vehicles — Part 6: Fire control and management systems*

EN 45545-7:2013, *Railway applications — Fire protection on railway vehicles — Part 7: Fire safety requirements for flammable liquid and flammable gas installations*

EN ISO 13943:2017, *Fire safety — Vocabulary (ISO 13943:2017)*

ISO 3864-1:2011, *Graphical symbols — Safety colours and safety signs — Part 1: Design principles for safety signs and safety markings*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 45545-1:2013 and EN ISO 13943:2017 apply.

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

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