



Irish Standard
I.S. EN 45545-4:2024

Version 1.0

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

I.S. EN 45545-4:2024 V1.0

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I.S. EN 45545-4:2024 V1.0 was published under the authority of the NSAI and came into effect on: 2024-03-08				
Consisting of:	DAV	Version	Published	Withdrawn*
I.S. EN 45545-4:2024	2024-03-07	1.0	2024-03-08	
Replaces:				
EN 45545-4:2013	All versions			
*Dates in the future are planned withdrawal dates				
DAV = Date of Availability of publication from CEN/CENELEC				
NOTE 1: Versions relate to the different elements assembled for any publication based on the edition issued by CEN/CENELEC. Publications prior to 2023-11-27 do not contain version history but if you need any more information please contact info@standards.ie.				
NOTE 2: The date of any NSAI previous adoptions may not match the date of its original CEN/CENELEC document.				

ICS number(s): 13.220.20, 45.060.01

NSAI 1 Swift Square Northwood, Santry Dublin 9 D09 A0E4 +353 1 807 3800 standards@nsai.ie NSAI.ie	Sales +353 1 857 6730 Standards.ie
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Údarás um Chaighdeán Náisiúnta na hÉireann

National Foreword

I.S. EN 45545-4:2024 V1.0 is the version of the NSAI adopted European document EN 45545-4:2024, *Railway applications - Fire protection on railway vehicles - Part 4: Fire safety requirements for rolling stock design*, including any Corrections, Amendments etc. to EN 45545-4:2024 listed on page(s) II.

This normative document by CEN/CENELEC the elaboration of which includes a public enquiry, followed by a Formal Vote of CEN/CENELEC national members and final ratification. This European Standard is published as an identical national standard and every conflicting national standard will be withdrawn. The content of a European Standard does not conflict with the content of any other EN (and HD for CENELEC).

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EUROPEAN STANDARD

EN 45545-4

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2024

ICS 13.220.20; 45.060.01

Supersedes EN 45545-4:2013

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.

CEN members are the national standards bodies of 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 United Kingdom.



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COMITÉ EUROPÉEN DE NORMALISATION
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CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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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.

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EN 45545-4:2024 (E)

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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.

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/>
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