

English version

## Railway applications - Fire protection on railway vehicles - Part 4: Fire safety requirements for railway 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 Technical Specification (CEN/TS) was approved by CEN on 8 June 2008 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN/CENELEC will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

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## Foreword

This document (CEN/TS 45545-4:2009) has been prepared by Technical Committee CEN/TC 256 "Railway applications", the secretariat of which is held by DIN.

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 has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EC Directive(s).

For relationship with EC Directive(s), see informative Annex ZA, which is an integral part of this document.

This series of Technical Specifications *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 announce this Technical Specification: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

## Introduction

This part is based on 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 CEN/TS 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 specifies fire safety requirements for railway vehicle design to cover the objectives defined in CEN/TS 45545-1.

The measures and requirements specified in this part of the Technical Specification 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 vehicle, thus aiding evacuation.

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

This part is valid for railway vehicles defined in CEN/TS 45545-1.

## 2 Normative references

The following referenced documents are indispensable for the application 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.

CEN/TS 45545-1:2009, *Railway applications — Fire protection of railway vehicles — Part 1: General*

CEN/TS 45545-2, *Railway applications — Fire protection of railway vehicles — Part 2: Requirements for fire behaviour of materials and components*

CEN/TS 45545-5, *Railway applications — Fire protection of railway vehicles — Part 5: Fire safety requirements for electrical equipment including that of trolley buses, track guided buses and magnetic levitation vehicles*

CEN/TS 45545-6, *Railway applications — Fire protection of railway vehicles — Part 6: Fire control and management systems*

CEN/TS 45545-7, *Railway applications — Fire protection of railway vehicles — Part 7: Fire safety requirements for flammable liquid and flammable gas installations*

EN 60529, *Degrees of protection provided by enclosures (IP code) (IEC 60529:1989)*

EN ISO 13943:2000, *Fire safety — Vocabulary (ISO 13943:2000)*

EN ISO 15540, *Ships and marine technology — Fire resistance of hose assemblies — Test methods (ISO 15540:1999)*