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BS EN 45545-5:2013



BSI Standards Publication

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

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This British Standard is the UK implementation of EN 45545-5:2013. It supersedes DD CLC/TS 45545-5:2009, which is withdrawn, and together with BS EN 45545-1:2013, BS EN 45545-2:2013, BS EN 45545-3:2013, BS EN 45545-4:2013, BS EN 45545-6:2013 and BS EN 45545-7:2013, it supersedes BS 6853:1999 which will be withdrawn on 10 December 2015.

The UK participation in its preparation was entrusted to Technical Committee FSH/19, Fire Precautions in Railway Transport.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Published by BSI Standards Limited 2013

ISBN 978 0 580 71344 6
ICS 13.220.20; 45.060.01

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This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 July 2013.

Amendments/corrigenda issued since publication

Date	Text affected

NORME EUROPÉENNE
EUROPÄISCHE NORM

March 2013

ICS 13.220.20; 45.060.01

Supersedes CLC/TS 45545-5:2009

English version

**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**

Applications ferroviaires -
Protection contre les incendies dans les
véhicules ferroviaires -
Partie 5: Exigences de sécurité incendie
pour l'équipement électrique, y compris
celui des trolleybus, des autobus guidés et
des véhicules à sustentation magnétique

Bahnanwendungen -
Brandschutz in Schienenfahrzeugen -
Teil 5: Brandschutzanforderungen an die
elektrische Ausrüstung einschließlich der
von Oberleitungsbussen, spurgeführten
Bussen und Magnetschwebefahrzeugen

This European Standard was approved by on 2012-12-10. 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

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Foreword

This document (EN 45545-5:2013) has been prepared by the CEN/CENELEC Joint Working Group "Fire protection for railway applications" of CEN/TC 256 "Railway applications" and CENELEC/TC 9X "Electrical and electronic applications for railways".

The following dates are fixed:

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2013-12-10
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2015-12-10

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

This document supersedes CLC/TS 45545-5:2009.

This document has been prepared under a mandate given to CENELEC 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 ZZ, 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.

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Introduction

This European Standard 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 the different parts of EN 45545 will take into account the current operating conditions for European public rail transport.

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1 Scope

This Part of EN 45545 specifies the fire safety requirements for electrical equipment on railway vehicles, including that of trolley buses, track guided buses and magnetic levitation vehicles.

The measures and requirements, specified in this European Standard meet the objective of protecting passengers and staff in railway vehicles in the event of a fire on board by:

- lowering the risk of starting a fire both during operation and as a result of technical defect and/or malfunction of the electrical equipment,
- ensuring that electrical emergency equipment continues to be functional until evacuation is complete (see EN 45545-6).

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

EN 45545-2:2013, *Railway applications — Fire protection on railway vehicles — Part 2: Requirements for fire behavior of materials and components*

EN 45545-3:2013, *Railway applications — Fire protection on railway vehicles — Part 3: Fire resistance requirements for fire barriers*

EN 45545-4, *Railway applications — Fire protection on railway vehicles — Part 4: Fire safety requirements for rolling stock design*

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

EN 50124-1, *Railway applications — Insulation coordination — Part 1: Basic requirements — Clearances and creepage distances for all electrical and electronic equipment*

EN 50125-1, *Railway applications — Environmental conditions for equipment — Part 1: Equipment on board rolling stock*

EN 50153, *Railway applications — Rolling stock — Protective provisions relating to electrical hazards*

EN 50343, *Railway applications — Rolling stock — Rules for installation of cabling*

EN 61140, *Protection against electric shock — Common aspects for installation and equipment (IEC 61140)*

3 Terms and definitions

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

4 General requirements

The electrical design requirements used for railway vehicles are supplemented by the design requirements of this European Standard.