

STN	Železnice. Požiarna ochrana železničných vozidiel. Časť 5: Požiadavky na požiarnu ochranu elektrických zariadení vrátane elektrických zariadení trolejbusov, autobusov s vyhradenou vodiacou dráhou a magneticky nadnášaných vozidiel.	STN EN 45545-5+A1
		28 2401

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 03/16

Obsahuje: EN 45545-5:2013+A1:2015

Oznámením tejto normy sa ruší
STN EN 45545-5 (28 2401) z augusta 2013

122459

Úrad pre normalizáciu, metrológiu a skúšobníctvo SR, 2016
Podľa zákona č. 264/1999 Z. z. v znení neskorších predpisov sa môžu slovenské technické normy rozmnožovať a rozširovať iba so súhlasom Úradu pre normalizáciu, metrológiu a skúšobníctvo SR.

EUROPEAN STANDARD

EN 45545-5:2013+A1

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 2015

ICS 13.220.20; 45.060.01

Supersedes EN 45545-5:2013

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 CEN on 10 December 2012 and includes Amendment 1 approved by CEN on 14 August 2015.

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



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents		Page
European foreword		3
Introduction		4
1	Scope	5
2	Normative references	5
3	Terms and definitions	5
4	General requirements	6
5	Design requirements	6
5.1	Overload protection	6
5.2	Cabling	7
5.3	Electrical arc protection devices	7
5.4	Enclosure for electrical equipment	8
5.5	Cable ducts	8
5.6	Batteries for auxiliary power supply systems and supply circuits	8
5.7	Switchgear	9
5.8	Electrical emergency equipment	9
5.9	Bonding	9
5.10	Resistors and heating equipment	10
5.11	Locations exposed to current collection arcing	10
5.12	Forced ventilated equipment (including heating, cooling and air conditioning)	10
5.13	Flammable liquids used for insulation and cooling	10
6	Maintainability	10
6.1	Maintenance requirements	10
6.2	Modification of electrical equipment	11
7	Evaluation of conformity	11
Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2008/57/EC		12
Bibliography		14

European foreword

This document (EN 45545-5:2013+A1:2015) 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 April 2016, and conflicting national standards shall be withdrawn at the latest by April 2016.

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 includes Amendment 1 approved by CEN on 2015-08-14.

This document supersedes A1 EN 45545-5:2013 A1.

The start and finish of text introduced or altered by amendment is indicated in the text by tags A1 A1.

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 ZA, 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.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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.

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*

☐^{A1} EN 45545-2:2013+A1:2015 ☐^{A1}, *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*

☐^{A1} EN 50547, *Railway applications — Batteries for auxiliary power supply systems* ☐^{A1}

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

koniec náhľadu – text ďalej pokračuje v platenej verzii STN