

RAUDTEEALASED RAKENDUSED. PIIRATUD
LIIKUMISVÕIMEGA ISIKUTE KASUTATAVAD
RAKENDUSED. ÜLDNÕUDED. OSA 3: OPTILISED JA
HÕÕRDUMISE OMADUSED

Railway applications - Design for PRM use - General
requirements - Part 3: Optical and friction
characteristics

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 16584-3:2017 sisaldab Euroopa standardi EN 16584-3:2017 ingliskeelset teksti.	This Estonian standard EVS-EN 16584-3:2017 consists of the English text of the European standard EN 16584-3:2017.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 04.01.2017.	Date of Availability of the European standard is 04.01.2017.
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ICS 11.180.01, 45.020

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English Version

Railway applications - Design for PRM use - General requirements - Part 3: Optical and friction characteristics

Applications ferroviaires - Conception destinée à l'usage par les PMR - Exigences générales - Partie 3 : Caractéristiques optiques et de friction

Bahnanwendungen - Gestaltung für die Nutzung durch PRM - Allgemeine Anforderungen - Teil 3: Optische Eigenschaften und Rutschfestigkeit

This European Standard was approved by CEN on 10 September 2016.

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European foreword

This document (EN 16584-3:2017) 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of an identical text or by endorsement, at the latest by July 2017, and conflicting national standards shall be withdrawn at the latest by July 2017.

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 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 document is part of a suite of four ‘Design for PRM use’ standards that have in total nine parts:

- The EN 16584 series is a standard that covers both infrastructure and rolling stock — Railway applications — Design for PRM use — General requirements:
 - Part 1: Contrast (EN 16584-1);
 - Part 2: Information (EN 16584-2);
 - Part 3: Optical and friction characteristics (EN 16584-3).
- The EN 16585 series is a standard that covers rolling stock — Railway applications — Design for PRM use — Equipment and components on board rolling stock:
 - Part 1: Toilets (EN 16585-1);
 - Part 2: Elements for sitting, standing and moving (EN 16585-2);
 - Part 3: Clearways and internal doors (EN 16585-3).
- The EN 16586 series is a standard that covers rolling stock — Railway applications — Design for PRM use — Accessibility of persons with reduced mobility to rolling stock:
 - Part 1: Steps for access and egress (EN 16586-1);
 - Part 2: Boarding aids (EN 16586-2).
- EN 16587 is a standard that covers infrastructure — Railway applications — Design for PRM use — Requirements for obstacle free routes for infrastructure.

These standards aim to clarify the requirements (with clear and consistent terms and definitions) and to define the associated criteria and, where appropriate, methodologies to allow a clear pass/fail assessment.

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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This European standard describes the specific 'Design for PRM use' requirements applying to both infrastructure and rolling stock and the assessment of those requirements. The following applies to this standard:

- The definitions and requirements describe specific aspects of 'Design for PRM use' required by persons with disabilities and persons with reduced mobility as defined in the PRM TSI.
- This standard defines elements that are universally valid for obstacle free travelling including lighting, contrast, tactile feedback, transmission of visual and acoustic information. The definitions and requirements of this standard cover the infrastructure and rolling stock applications.
- This standard only refers to aspects of accessibility for PRM passengers it does not define non PRM related requirements and definitions.
- This standard assumes that the infrastructure or rolling stock is in its defined operating condition.
- Where minimum or maximum dimensions are quoted these are absolute NOT nominal requirements.

The 'General requirements' standard is written in three parts:

- Part 1 contains:
 - contrast.
- Part 2 contains:
 - spoken information;
 - written information;
 - tactile information;
 - pictograms.
- This document is Part 3 and contains:
 - lighting;
 - low reflective properties;
 - transparent obstacles;
 - slip resistance.

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 1838, *Lighting applications — Emergency lighting*

EN 12464 (series), *Light and lighting — Lighting of work places*

EN 13272:2012, *Railway applications — Electrical lighting for rolling stock in public transport systems*

EN 16584-1, *Railway applications — Design for PRM use — General Requirements — Part 1: Contrast*

EN 16584-2, *Railway applications — Design for PRM use — General Requirements — Part 2: Information*

prEN 16587:2013, *Railway applications — Design for PRM use — Requirements for Obstacle Free Routes for Infrastructure*

EN ISO 2813, *Paints and varnishes - Determination of gloss value at 20°, 60° and 85° (ISO 2813)*

ISO 4649, *Rubber, vulcanized or thermoplastic — Determination of abrasion resistance using a rotating cylindrical drum device*

ISO 21542, *Building construction — Accessibility and usability of the built environment*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

contrast

perception of a difference visually between one surface or element of a building/rail vehicle and another by reference to their light reflectance values (LRV) or luminance values

Note 1 to entry: See BS 8300:2009+A1:2010 for further information.

3.2

Light Reflectance Value

LRV

total quantity of visible light that is reflected by a surface at all wavelengths and directions when illuminated by a light source

Note 1 to entry: The measured range of LRV is between 0 points and 100 points.

3.3

low reflective properties

characteristics that reduce reflection of light from a surface