
Železniške naprave - Infrastruktura - Protihrupne ovire in pripadajoče naprave, ki vplivajo na širjenje zvoka v zraku - Preskusna metoda za ugotavljanje akustičnih lastnosti - 3-1. del: Normalizirani spekter železniškega hrupa in enomestne številske stopnje razpršenega zvočnega polja

Railway applications - Infrastructure - Noise barriers and related devices acting on airborne sound propagation - Test method for determining the acoustic performance - Part 3-1: Normalized railway noise spectrum and single number ratings for diffuse sound field applications

Bahnanwendungen - Oberbau - Lärmschutzwände und verwandte Vorrichtungen zur Beeinflussung der Luftschallausbreitung - Prüfverfahren zur Bestimmung der akustischen Eigenschaften - Teil 3-1: Produktspezifische Merkmale - Standardisiertes Schienenverkehrslärmspektrum und Einzahl-Angaben für Anwendungen im diffusen Schallfeld

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Applications ferroviaires - Infrastructure - Dispositifs de réduction du bruit - Méthode d'essai pour la détermination des performances acoustiques - Partie 3-1 : Spectre de bruit ferroviaire normalisé et indices uniques d'évaluation pour des applications en champ sonore diffus

Ta slovenski standard je istoveten z: EN 16272-3-1:2023

ICS:

17.140.30	Emisija hrupa transportnih sredstev	Noise emitted by means of transport
93.100	Gradnja železnic	Construction of railways

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English Version

Railway applications - Infrastructure - Noise barriers and related devices acting on airborne sound propagation - Test method for determining the acoustic performance - Part 3-1: Normalized railway noise spectrum and single number ratings for diffuse sound field applications

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This European Standard was approved by CEN on 4 September 2023.

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European foreword

This document (EN 16272-3-1:2023) has been prepared by Technical Committee CEN/TC 256 “Railway application”, 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of an identical text or by endorsement, at the latest by April 2024, and conflicting national standards shall be withdrawn at the latest by April 2024.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 16272-3-1:2012.

The main changes compared to the previous edition are listed below:

- ISO/IEC Guide 98-3, ISO 12999-1 and ISO 12999-2 have been added to the References;
- The ‘Terms, definitions, symbols and abbreviations’ clause has been updated;
- In EN 16272-1, the method for determining sound absorption coefficients in each one-third octave band, as described in EN ISO 354, has been modified: the Sabine absorption coefficient α_s has been replaced by a new absorption coefficient α_{NRD} that is specific to noise barriers and related devices acting on airborne sound propagation and which takes account of the volume of the test sample (the new coefficient α_{NRD} might be derived from α_s);
- Consequently, in this document the new absorption coefficient α_{NRD} is used to calculate the single-number rating of sound absorption $DL_{\alpha_{NRD}}$;
- An annex with the values of the standard deviation of reproducibility and repeatability of single-number ratings has been added; this makes possible the declaration of the measurement uncertainty and the related confidence level, which is now mandatory (Annex C);
- The Bibliography has been added.

EN 16272-3-1 is part of a series and is intended to be read in conjunction with the other parts. All parts are listed in the following:

- EN 16272-1, *Railway applications — Infrastructure — Noise barriers and related devices acting on airborne sound propagation — Test method for determining the acoustic performance — Part 1: Intrinsic characteristics — Sound absorption under diffuse sound field conditions*
- EN 16272-2, *Railway applications — Infrastructure — Noise barriers and related devices acting on airborne sound propagation — Test method for determining the acoustic performance — Part 2: Intrinsic characteristics — Airborne sound insulation under diffuse sound field conditions*
- EN 16272-3-1, *Railway applications – Infrastructure — Noise barriers and related devices acting on airborne sound propagation — Test method for determining the acoustic performance — Part 3-1: Normalized railway noise spectrum and single number ratings for diffuse sound field applications (the present document)*

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- EN 16272-3-2, *Railway applications – Infrastructure — Noise barriers and related devices acting on airborne sound propagation — Test method for determining the acoustic performance — Part 3-2: Normalized railway noise spectrum and single number ratings for direct sound field applications*
- EN 16272-4, *Railway applications – Track — Noise barriers and related devices acting on airborne sound propagation — Test method for determining the acoustic performance — Part 4: Intrinsic characteristics — In situ values of sound diffraction under direct sound field conditions*
- EN 16272-5, *Railway applications – Infrastructure — Noise barriers and related devices acting on airborne sound propagation — Test method for determining the acoustic performance — Part 5: Intrinsic characteristics — Sound absorption under direct sound field conditions*
- EN 16272-6, *Railway applications – Infrastructure — Noise barriers and related devices acting on airborne sound propagation — Test method for determining the acoustic performance — Part 6: Intrinsic characteristics — Airborne sound insulation under direct sound field conditions*
- CEN/TS 16272-7, *Railway applications – Track — Noise barriers and related devices acting on airborne sound propagation — Test method for determining the acoustic performance — Part 7: Extrinsic characteristics — In situ values of insertion loss*

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