

STN P	Stanovenie akustických vlastností vodorovného dopravného značenia pozemných komunikácií Meranie metódou tesnej blízkosti	STN P CEN/TS 17812 73 7022
------------------	---	--

Determination of the acoustic properties of markings - The CPX measurement method

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. 10/22

Táto predbežná slovenská technická norma je určená na overenie. Prípadné pripomienky pošlite do júla 2024 Úradu pre normalizáciu, metrológiu a skúšobníctvo SR.

Obsahuje: CEN/TS 17812:2022

TECHNICAL SPECIFICATION
SPÉCIFICATION TECHNIQUE
TECHNISCHE SPEZIFIKATION

CEN/TS 17812

July 2022

ICS 17.140.30; 93.080.30

English Version

Determination of the acoustic properties of markings - The CPX measurement method

Détermination des propriétés acoustiques de
marquages - La méthode CPX

Messung der akustischen Eigenschaften von
Markierungen - Das Nahfeldmessverfahren

This Technical Specification (CEN/TS) was approved by CEN on 6 June 2022 for provisional application.

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

CEN members are required to announce the existence of this CEN/TS in the same way as for an EN and to make the CEN/TS available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the CEN/TS) until the final decision about the possible conversion of the CEN/TS into an EN is reached.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, 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: Rue de la Science 23, B-1040 Brussels

CEN/TS 17812:2022 (E)

Contents		Page
European foreword		3
Introduction		4
1	Scope	5
2	Normative references	5
3	Terms and definitions	5
4	The measurement method	6
4.1	Test site	6
4.2	Measurement	6
4.2.1	The Close Proximity (CPX) Method (EN ISO 11819-2:2017)	6
4.2.2	Measuring on the marking	7
4.2.3	Goal of the measurement	8
4.2.4	Pavement properties and condition	8
4.2.5	Reference measurement on the pavement (optional)	9
4.3	Analysis	9
4.4	Test report	9
5	Safety considerations	10
Annex A (informative) Uncertainty analysis		11
Bibliography		12

European foreword

This document (CEN/TS 17812:2022) has been prepared by Technical Committee CEN/TC 226 “Road equipment”, the secretariat of which is held by AFNOR.

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.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

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

CEN/TS 17812:2022 (E)**Introduction**

Structured road markings present one of several options to obtain an enhanced night time visibility during rain or wetness. It is for this reason that they underwent a growing popularity in the last years. Structured road markings can however also produce an increased noise emission during wheel passages, which may be observed in the vehicle but also in the vicinity of the road. The sound increase inside the car can be considered as a positive side effect, as it alarms the driver and may be very helpful for the prevention of “doze off” traffic accidents. The sound increase perceived outside the car, however, may have a positive aspect as it can warn people on the emergency lane about the approaching vehicle, but it may as well annoy people living around.

It is desirable that a measurement method exists to assess the noise production of those road markings during wheel passages which is representative, reproducible and generally applicable throughout Europe. This document deals with a dedicated method which has been developed by the expert panel “noise” of the CEN/TC 226/WG 2.

1 Scope

This document outlines a method to measure the typical external noise emission produced when tyres of passenger car roll over a structured road marking. The result is a measure for the noise perceived in the surroundings of the road, hence not for interior noise in the car.

This method can be used for three purposes:

- determination of initial acoustic properties of a road marking, yielding a noise label for a given system;
- testing of the acoustic conformity of a particular marking to the noise label determined during the determination of initial acoustic properties;
- monitoring of the acoustic properties in the course of its lifetime.

The test result allows the road owner to make an assessment of the risk of nuisance when s/he considers a particular road marking system for application on a road in a noise sensitive area, e.g. built up areas. The method is also applicable to measurements on milled rumble strips.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

EN ISO 11819-2:2017, *Acoustics - Measurement of the influence of road surfaces on traffic noise - Part 2: The close-proximity method (ISO 11819-2:2017)*

ISO/TS 11819-3:2021, *Acoustics — Measurement of the influence of road surfaces on traffic noise — Part 3: Reference tyres*

EN ISO 13473-1:2019, *Characterization of pavement texture by use of surface profiles - Part 1: Determination of mean profile depth (ISO 13473-1:2019, Corrected version 2021-06)*

EN 13036-1:2010, *Road and airfield surface characteristics - Test methods - Part 1: Measurement of pavement surface macrotexture depth using a volumetric patch technique*

IEC 61672-1, *Electroacoustics — Sound level meters — Part 1: Specifications*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN