

Vertical road signs - Portable deformable warning devices and delineators - Portable road traffic signs - Cones and cylinders

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN 13422:2019 sisaldab Euroopa standardi EN 13422:2019 ingliskeelset teksti.	This Estonian standard EVS-EN 13422:2019 consists of the English text of the European standard EN 13422:2019.
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 27.11.2019.	Date of Availability of the European standard is 27.11.2019.
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English Version

## Vertical road signs - Portable deformable warning devices and delineators - Portable road traffic signs - Cones and cylinders

Signalisation routière verticale - Dispositifs d'alerte et  
balisages de voie souples et mobiles - Signaux  
temporaires mobiles - Cônes et cylindres

Straßenverkehrszeichen (vertikal) - Transportable  
Straßenverkehrszeichen - Leitkegel und Leitzylinder

This European Standard was approved by CEN on 16 September 2019.

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, 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  
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## European foreword

This document (EN 13422:2019) has been prepared by Technical Committee CEN/TC 226 "Road equipment", the secretariat of which is held by AFNOR.

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 May 2020, and conflicting national standards shall be withdrawn at the latest by May 2020.

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 13422:2004+A1:2009.

In comparison with the previous edition, the following technical modifications have been made:

- a) updating of the normative references;
- b) clarification of the definitions in Clause 3;
- c) amendment of performance requirements for Class R 3, R<sub>L</sub> 3 and L<sub>rel</sub> 1;
- d) clarification of the test method for the relative distribution of retroreflective performance.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: 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.

## Introduction

This document provides requirements for the construction and visual performance of traffic cones and cylinders. The visual performance at daytime is specified by the colour and luminance factor. The visual performance at night-time is specified by the coefficient of retroreflection  $R_A$ , the coefficient of retroreflected luminance  $R_L$  and the relative distribution of retroreflective performance  $L_{rel}$ .

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## 1 Scope

This document specifies requirements for new traffic cones and new traffic cylinders with retroreflective properties.

This document specifies minimum essential visual and physical performance characteristics; test methods for determination of product performance and the means by which this performance may be communicated to the user and the public including safety enforcement agencies.

The document provides a series of categories or classes by which a traffic cone or traffic cylinder may be specified for use in different applications in accordance with best practice.

In the case of physical properties, performance levels and indicative tests are provided for cold weather, stability, and impact resistance when dropped. Requirements for visual recognition properties, colour, retroreflectivity and luminance are provided.

Provision for identification and marking to declared levels of performance is provided.

There are other product shapes which perform similar functions. This document does not cover devices made in other shapes, or which do not meet the design requirements of this document.

## 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 1043-1, *Plastics — Symbols and abbreviated terms — Part 1: Basic polymers and their special characteristics (ISO 1043-1)*

EN ISO/CIE 11664-1:2019, *Colorimetry - Part 1: CIE standard colorimetric observers (ISO/CIE 11664-1:2019)*

EN ISO 11664-2:2011, *Colorimetry - Part 2: CIE standard illuminants (ISO 11664-2:2007)*

ISO 4:1997, *Information and documentation — Rules for the abbreviation of title words and titles of publications*

CIE 15:2004, *Colorimetry*

CIE S 017/E:2011, *International lighting vocabulary*

CIE 54.2:2001, *Retroreflection — Definition and measurement*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 4:1997, CIE S 017/E:2011 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>