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English Version

**Tactile paving surface indicators produced from concrete, clay
and stone**

Surfaces tactiles d'indication au sol en béton, terre cuite et
pierre naturelle

Taktile Bodenindikatoren gefertigt aus Beton, Ton und
Stein

This Technical Specification (CEN/TS) was approved by CEN on 18 September 2007 for provisional application.

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Foreword

This document (CEN/TS 15209:2008) has been prepared by Technical Committee CEN/TC 178 "Paving units and kerbs", the secretariat of which is held by BSI.

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Introduction

The nature of visual impairment

The nature of visual loss varies considerably among individuals. Generally, the result of different eye conditions will lead to the following types of impairment:

- a limited field of vision, being unable to see to the sides or up and down;
- some loss of central vision limiting the ability to see fine detail;
- acute short-sightedness, seeing the world as a continuous blur;
- uncontrollable oscillations of the eyeball leading to an inability to see objects clearly;
- night blindness, a sensitivity to light and a tendency to be dazzled by glare.

Visually impaired people detect information about the environment by the use of non-visual features, for example, audible and tactile features. A loss of sight is not accompanied by an increase in the effectiveness of other non-visual senses. However, visually impaired people generally place more emphasis on information received via other senses, for example the sense of touch.

The use of tactile information

When moving around the pedestrian environment, visually impaired people, using a range of mobility equipment including the long cane, will actively seek and make use of paving surface tactile information, particularly detectable contrasts in surface texture.

The ability to detect contrasts in texture underfoot varies from one individual to another. For example, older visually impaired people and people who have lost their sight through certain medical conditions, such as diabetes, may well have reduced sensitivity in their feet.

It is important that tactile warning of potential hazards, e.g. a road crossing or a stair, are rigorous enough to be detectable by most people but without constituting a trip hazard or causing extreme discomfort.

Considering the walking speed and the length of one step by a visually impaired pedestrian, the 'width' of any warning surface is a critical parameter.

The importance of luminance contrast

In addition to tactile information those visually impaired people who have some residual vision will also make use of the luminance contrast between surfaces for orientation and guidance. Those characteristics can therefore be used by designers, planners, engineers and others involved in the design of the built and pedestrian environments to accentuate the presence of hazards and amenities.

This Technical Specification cannot deal with luminance contrast since it relies on the difference between adjacent surfaces which need not both be tactile surfaces. However, manufacturers should be aware of this issue in considering the range of colour and tones they provide in their tactile products.

1 Scope

This document specifies the nominal dimensions for surface profile features and patterns for the surfaces of pedestrian paving units, used to convey information for visually impaired people. It applies to paving units made of concrete, clay and stone.

This document does not specify requirements for visibility (colour, luminance contrast or profile) except where this visibility is provided by the tactile paving surface indicator. It does not specify material characteristics.

NOTE 1 See Introduction for an explanation for the exclusion of luminance contrast requirements.

NOTE 2 A guide to the various applications of tactile surfaces in a number of European countries is given in informative Annex A.

2 Normative references

The following referenced documents are indispensable for the application 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 1339:2003, *Concrete paving flags — Requirements and test methods*

EN 1344:2002, *Clay pavers — Requirements and test methods*

3 Terms and definitions

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

3.1 General terms and definitions

3.1.1

visually impaired

blind or partially sighted

3.1.2

profile feature

single component of a tactile paving surface indicator

NOTE For example: dome, flat-topped dome, cylinder, bar or cuboid.

3.1.3

tactile paving surface indicator

profiled paving finish used to convey information to visually impaired pedestrians about hazards and amenities