



# SLOVENSKI STANDARD

## SIST EN 1340:2003

01-julij-2003

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### Betonski robniki - Zahteve in preskusne metode

Concrete kerb units - Requirements and test methods

Bordsteine aus Beton - Anforderungen und Prüfverfahren

Éléments pour bordures de trottoir en béton - Prescriptions et méthodes d'essai

Ta slovenski standard je istoveten z: **EN 1340:2003**

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93.080.20	Materiali za gradnjo cest	Road construction materials

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EUROPEAN STANDARD  
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## Concrete kerb units - Requirements and test methods

Bordures de trottoir en béton - Prescriptions et méthodes  
d'essai

Bordsteine aus Beton - Anforderungen und Prüfverfahren

This European Standard was approved by CEN on 16 October 2003.

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EUROPÄISCHES KOMITEE FÜR NORMUNG

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## Contents

	page
Foreword.....	5
1 Scope.....	6
2 Normative references.....	6
3 Terms and definitions.....	7
4 Requirements for materials.....	9
4.1 General.....	9
4.2 Asbestos.....	9
5 Requirements for products.....	9
5.1 General.....	9
5.2 Shape and dimensions.....	10
5.2.1 General.....	10
5.2.2 Work dimensions.....	10
5.2.3 Unit geometry.....	10
5.3 Physical and mechanical properties.....	15
5.3.1 General.....	15
5.3.2 Weathering resistance.....	15
5.3.3 Bending strength.....	15
5.3.4 Abrasion resistance.....	16
5.3.5 Slip/skid resistance.....	17
5.3.6 Fire performance.....	17
5.3.7 Thermal conductivity.....	17
5.4 Visual aspects.....	17
5.4.1 Appearance.....	17
5.4.2 Texture.....	18
5.4.3 Colour.....	18
6 Evaluation of conformity criteria.....	18
6.1 General.....	18
Demonstration of conformity.....	18
Assessment of conformity.....	18
6.2 Type testing of the product.....	19
6.2.1 Initial type testing.....	19
6.2.2 Further type testing.....	19
6.2.3 Sampling, testing and compliance criteria.....	19
6.3 Factory production control.....	21
6.3.1 General.....	21
6.3.2 Equipment.....	21
6.3.3 Raw and other incoming materials.....	21
6.3.4 Production process.....	21
6.3.5 Product testing.....	21
6.3.6 Marking, storage and delivery of products.....	22
6.3.7 Non-conforming products.....	22
6.3.8 Product conformity criteria.....	22
7 Marking.....	24
8 Test report.....	24
Annex A (informative) Inspection schemes.....	26
A.1 Equipment inspection.....	26

A.2	Materials inspection.....	27
A.3	Production process inspection .....	28
A.4	Product inspection.....	28
A.5	Switching rules.....	29
Annex B	(normative) Procedure for acceptance testing of a consignment at delivery .....	30
B.1	General.....	30
B.2	Sampling procedure.....	30
B.3	Compliance criteria.....	31
Annex C	(normative) Measurement of dimensions of a single unit .....	32
C.1	Preparation .....	32
C.2	Overall dimensions .....	32
C.3	Draw.....	33
C.4	Chase.....	33
C.5	Straightness and bow.....	33
C.6	Thickness of facing layer .....	33
C.7	Test report.....	34
Annex D	(normative) Determination of freeze/thaw resistance with de-icing salt.....	35
D.1	Principle .....	35
D.2	Specimen .....	35
D.3	Materials.....	35
D.4	Apparatus.....	35
D.5	Preparation of test specimens.....	36
D.6	Procedure.....	39
Calculation of test results	.....	40
D.8	Test report.....	41
Annex E	(normative) Determination of total water absorption .....	42
E.1	Principle .....	42
E.2	Specimen .....	42
E.3	Materials.....	42
E.4	Apparatus.....	42
E.5	Preparation of the test specimens .....	42
E.6	Procedure.....	42
E.7	Calculation of test results .....	43
E.8	Test report.....	43
Annex F	(normative) Measurement of bending strength.....	44
F.1	Apparatus.....	44
F.2	Preparation .....	46
F.3	Procedure.....	46
F.4	Calculation of test results .....	46
F.5	Test report.....	47
Annex G	(normative) Measurement of abrasion resistance.....	48
G.1	Principle of wide wheel abrasion test .....	48
G.2	Abrasive material .....	48
G.3	Apparatus.....	48
G.4	Calibration.....	53
G.5	Preparation of the specimen.....	53
G.6	Procedure.....	54
G.7	Measuring the groove.....	54
G.8	Calculation of test results .....	55
G.9	Test report.....	55
Annex H	(normative) Measuring of abrasion according to the Böhme test.....	56
H.1	Principle .....	56
H.2	Abrasive material .....	56
H.3	Apparatus.....	56
H.4	Preparation of specimens .....	58

## EN 1340:2003 (E)

H.5	Procedure.....	58
H.6	Calculation of test results .....	58
H.7	Test report.....	59
<b>Annex I (normative) Method for the determination of unpolished slip resistance value (USRV) .....</b>		
I.1	Principle .....	60
I.2	Apparatus.....	61
I.3	Calibration.....	67
I.4	Sampling .....	67
I.5	Procedure.....	67
I.6	Calculation of test results .....	68
I.7	Test report.....	68
<b>Annex J (normative) Verification of visual aspects .....</b>		
J.1	Preparation .....	69
J.2	Procedure.....	69
<b>Annex K (informative) Example of the application of the method for checking conformity of bending strength by variables (6.3.8.3.B.) .....</b>		
K.1	General .....	70
K.2	Basic formula.....	70
K.3	Acceptance factors .....	70
K.4	Standard deviations s.....	71
K.5	Application of switching rules .....	71
K.6	Results .....	71
<b>Annex ZA Annex ZA (informative) Clauses of this European Standard addressing the provisions of the EU Construction Products Directive (89/106/EEC).....</b>		
ZA.1	Scope and relevant characteristics .....	73
ZA.2	Attestation of conformity .....	75
ZA.3	CE marking and labelling.....	76

SIST EN 1340:2003

<https://standards.itech.ai/catalog/standards/sist/4c25e52d-92cd-4dae-b62f-8a4a5d27cdea/sist-en-1340-2003>

## Foreword

This document (EN 1340:2003) has been prepared by Technical Committee CEN/TC 178 "Paving units and kerbs", the secretariat of which is held by BSI.

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 October 2003, and conflicting national standards shall be withdrawn at the latest by January 2005.

This document has been prepared under Mandates M/119 and M/122 given to CEN by the European Commission and the Free Trade Association and supports the essential requirements of EU Directives.

For the relationship with the Construction Products Directive see informative annex ZA, which is an integral part of this document.

No existing European Standard is superseded.

The annexes B, C, D, E, F, G, H, I and J are normative, the annexes A, K and ZA are informative.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

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## EN 1340:2003 (E)

## 1 Scope

This European Standard specifies materials, properties, requirements and test methods for unreinforced, cement bound precast concrete kerb units, channels and complementary fittings, that are for use in trafficked paved areas and roof coverings.

The units are used to fulfil one or more of the following:

Separation, physical or visual delineation, the provision of drainage or the containment of paved areas or other surfacing.

In case of regular use of studded tyres, additional requirements are sometimes needed.

This standard provides for the product marking and the evaluation of conformity of the product to this European standard.

Apart from the tolerances, this standard does not include requirements for cross-sections, shapes and dimensions.

This standard does not deal with the tactility or visibility of kerbs.

## 2 Normative references

This European Standard incorporates by dated and undated references, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references, the latest edition of the publication referred to applies (including amendments).

EN 10083-2, *Quenched and tempered steels — Part 2: Technical delivery conditions for unalloyed quality steels.*

EN 13369, *Common rules for precast concrete products.*

EN ISO 4288, *Geometric product specification (GPS) - Surface texture - Profile method: Rules and procedures for the assessment of surface texture (ISO 4288:1996).*

EN ISO 6506-1, *Metallic materials - Brinell hardness test - Part 1: Test method.*

EN ISO 6506-2, *Metallic materials - Brinell hardness test - Part 2: Verification and calibration of testing machines.*

EN ISO 6506-3, *Metallic materials - Brinell hardness test - Part 3: Calibration of reference blocks.*

ISO 48, *Rubber, vulcanised or thermoplastic — Determination of hardness (hardness between 10 IRHD and 100 IRHD).*

ISO 4662, *Rubber — Determination of rebound resilience of vulcanizates.*

ISO 7619, *Rubber — Determination of indentation hardness by means of pocket hardness meters.*

ISO 7873, *Control charts for arithmetic average with warning limits.*

ISO 7966, *Acceptance control charts.*



ISO 8486-1:1996, *Bond abrasives — Determination and designation of grainsize distribution — Macrogrits F4 to F220.*

### 3 Terms and definitions

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

#### 3.1

##### **concrete kerb unit**

precast concrete unit, intended to separate surfaces of the same or different levels to provide:

- physical or visual delineation or containment;
- individually or in combination with other kerbs, drainage channels;
- separation between surfaces submitted to different kinds of traffic.

#### 3.2

##### **complementary fitting**

unit, sometimes a part of a kerb, channel etc, which is used as a transition piece for changes in direction, shape or height or a small piece to complete a line

#### 3.3

##### **overall length**

length of a kerb excluding any interlocking features or spacers

#### 3.4

##### **height**

distance between the bed face and the top of the kerb

#### 3.5

##### **bed face**

lower surface in contact with the ground after laying

#### 3.6

##### **face**

surface intended by the manufacturer to be seen when laid and in use

#### 3.7

##### **facing layer**

layer of concrete on the face, or part of a face, of different materials and/or properties to the main body or backing layer

#### NOTE

To be distinguished from wipe, being a fine cement mortar or slurry applied to the surface of the kerb.

#### 3.8

##### **draw**

intended angle of the side face from the vertical plane over the full height of a kerb as shown in Figure 1

#### 3.9

##### **chamfer**

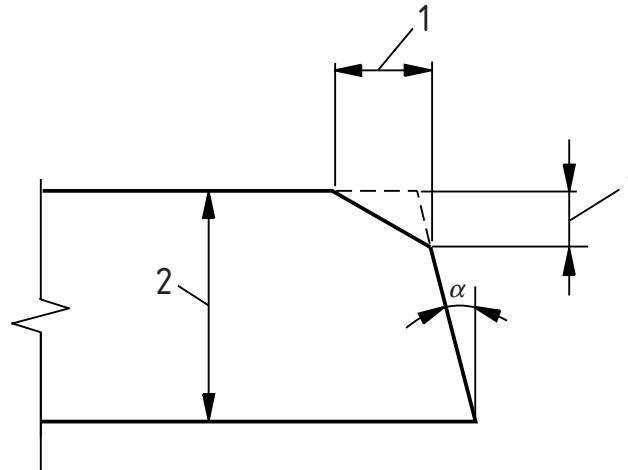
bevelled arris, as shown in Figure 1

## EN 1340:2003 (E)

## 3.10

**arris**

part of a kerb where two faces meet. It can be bevelled, rounded, chamfered, radiussed or splayed



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**Key**

1 Chamfer

2 Height

 $\alpha$  Draw

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**Figure 1 — Example of chamfer and draw**

## 3.11

**work dimension**

dimension of a kerb specified for its manufacture to which the actual dimension should conform within specified permissible deviations

## 3.12

**secondary processing**

manufacturing process carried out after basic manufacture before or after hardening on the whole kerb or any surface

## 3.13

**actual dimension**

dimension of a kerb as measured

## 3.14

**chased side face**

side face of a concrete kerb, having a recessed profile

## 3.15

**skid resistance**

ability to resist relative movement between a vehicle tyre and the trafficked concrete kerb surface

**3.16****slip resistance**

ability to resist relative movement between a pedestrian foot and the trafficked concrete kerb surface

**3.17****reference line**

kerb or channel line to which the unit is intended to be laid

**3.18****traffic face**

face of a kerb intended by the manufacturer to be above a road surface and which provides containment of traffic

**3.19****wipe**

fine cement mortar or slurry applied to the surface of the units

## 4 Requirements for materials

### 4.1 General

Only materials with suitability established in terms of their properties and performance shall be used in the manufacture of concrete kerb units. The suitability requirements of the materials used shall be given in the manufacturer's production control documentation.

Where, by conformity with relevant specifications, the properties and performance of materials have been demonstrated, further testing need not be performed.

A reference scheme for materials inspection is given in annex A.

### 4.2 Asbestos

Asbestos, or materials containing asbestos, shall not be used.

## 5 Requirements for products

### 5.1 General

The performance requirements of concrete kerb units are defined by classes which have associated marking designations.

Kerbs may be produced with a single concrete throughout or with different facing and backing layers.

When kerbs are produced with a facing layer this layer shall have a minimum thickness of 4 mm over that area claimed by the manufacturer to be faced, when measured in accordance with annex C. Isolated particles of aggregate protruding into the facing layer shall be ignored. The facing layer shall be an integral part of the kerb.

A bevelled arris exceeding 2 mm shall be described as chamfered. Its dimensions shall be declared by the manufacturer.

Kerbs may be produced with functional and/or decorative profiles, which shall not be included in the work dimensions of a kerb.

**EN 1340:2003 (E)**

The surface of kerbs may be textured, secondary processed or treated chemically; these finishes or treatments shall be described and declared by the manufacturer.

**5.2 Shape and dimensions****5.2.1 General**

All references to dimensions in this subclause are to work dimensions.

The conformity criteria corresponding to each requirement taken separately are given in 6.3.8.1. The dimensions and deviations shall be measured according to annex C.

National standards may specify kerb cross-sections and lengths.

NOTE The size of the space allocated to the kerb should include an allowance for joints and deviations.

**5.2.2 Work dimensions**

The work dimensions shall be stated by the manufacturer.

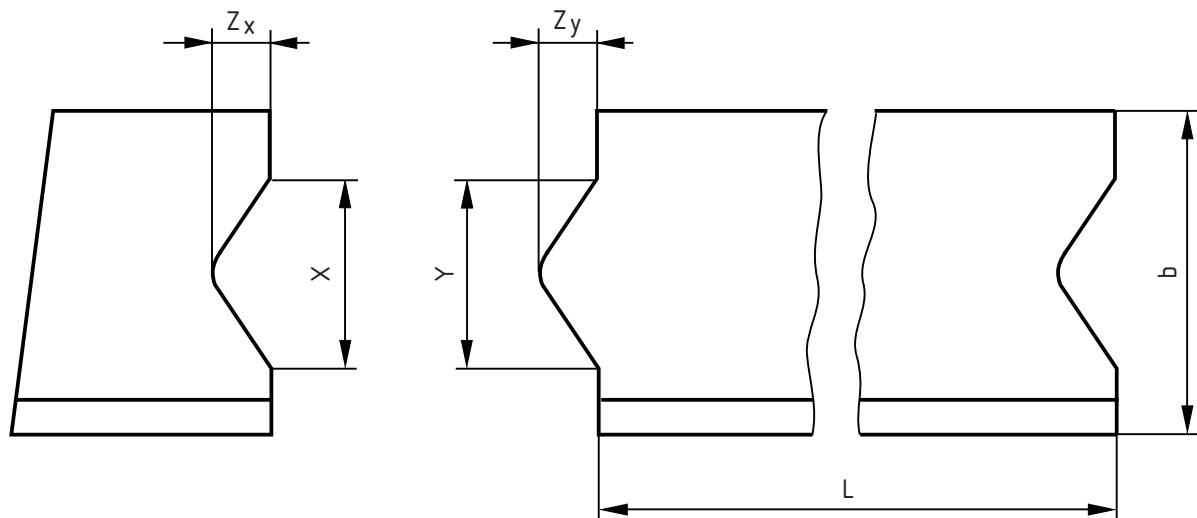
NOTE The recommended length of a straight kerb including joint is 1 000 mm.

**5.2.3 Unit geometry****5.2.3.1 End treatment**

Kerbs may be produced with plain ends or with end features to facilitate interlocking or laying. These features shall be declared by the manufacturer.

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Figures 2, 3 and 4 show examples. [standards.iteh.ai/catalog/standards/sist/4c25e52d-92cd-4dae-b62f-8a4a5d27cdea/sist-en-1340-2003](https://standards.iteh.ai/catalog/standards/sist/4c25e52d-92cd-4dae-b62f-8a4a5d27cdea/sist-en-1340-2003)

**Key**

$Y \leq X - 3 \text{ mm}$  and  $Z_y \leq Z_x - 3 \text{ mm}$

$X$  minimum :  $\geq 1/5 b$  and  $\geq 20 \text{ mm}$

$X$  maximum :  $\leq 1/3 b$  and  $\leq 70 \text{ mm}$

$Z_y$  maximum :  $Y/2$

Tolerance on  $X$  and  $Z_x$  - 1, + 2 mm

Tolerance on  $Y$  and  $Z_y$  - 2, + 1 mm

$L$  Length

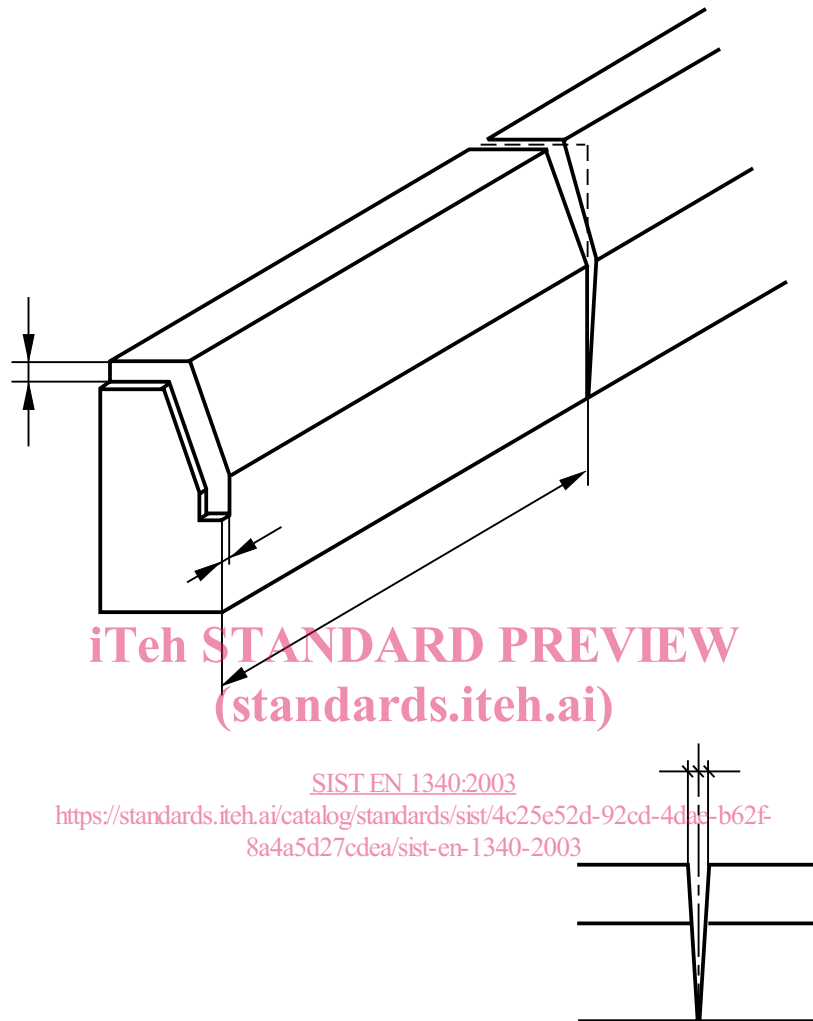
$b$  Width

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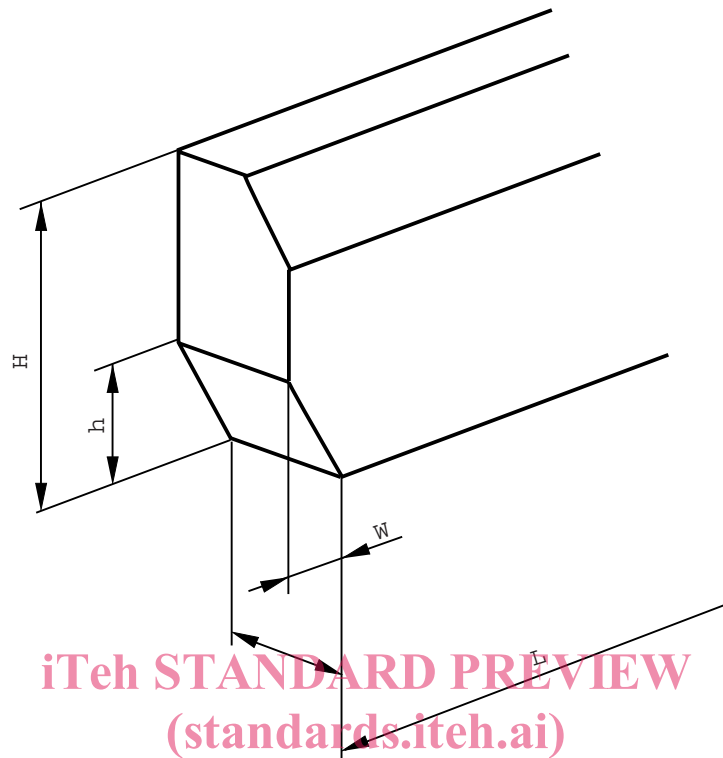
**Figure 2 — Example of interlocking feature; requirement of dimensions and permissible deviations**



**Key**

L Length

**Figure 3 — Example of dimensions of chase and draw**

**Key**

H Height of kerb unit

h Height of recess or cut out

W Width

L Length

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**Figure 4 — Example of a recess or cut-out on the bottom end of a kerb**

### 5.2.3.2 Radiussed kerbs

Radiussed kerbs shall be described as convex or concave. The description shall refer to the reference line. The radius of a kerb and its overall length shall be measured to and along its reference line.

The preferred radii of the kerb are 0,5; 1; 2; 3; 4; 5; 6; 8; 10 and 15 m. The recommended length is 780 mm. National standards may specify other radii and length.