

**Products and systems for the
protection and repair of concrete
structures - Test methods - Part 1:
Determination of linear shrinkage for
polymers and surface protection
systems (SPS)**

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of concrete structures - Test methods - Part 1:
Determination of linear shrinkage for polymers and
surface protection systems (SPS)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 12617-1:2003 sisaldab Euroopa standardi EN 12617-1:2003 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 16.05.2003 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 12617-1:2003 consists of the English text of the European standard EN 12617-1:2003.</p> <p>This document is endorsed on 16.05.2003 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala: This European Standard specifies a method for determining the linear shrinkage of solvent free multicomponent cold curing reactive resins for the protection and repair of concrete structures</p>	<p>Scope: This European Standard specifies a method for determining the linear shrinkage of solvent free multicomponent cold curing reactive resins for the protection and repair of concrete structures</p>
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ICS 91.080.40

Võtmesõnad: area, binders, defects, density (mass/volume), materials, protection, protection systems, repair, repairs, resins, shrinkage, shrinkage behaviour, structures, surface protection, surfaces, testing, thermosetting polymers, volume

English version

Products and systems for the protection and repair of concrete structures - Test methods - Part 1: Determination of linear shrinkage for polymers and surface protection systems (SPS)

Produits et systèmes pour la protection et la réparation des structures en béton - Méthodes d'essai - Partie 1: Détermination du retrait linéaire des polymères et des systèmes de protection de surface

Produkte und Systeme für den Schutz und die Instandsetzung von Betontragwerken - Prüfverfahren - Teil 1: Bestimmung des linearen Schrumpfes von Polymeren und Oberflächenschutzsystemen (OS)

This European Standard was approved by CEN on 3 March 2003.

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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 Management Centre has the same status as the official versions.

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Foreword

This document (EN 12617-1:2003) has been prepared by Technical Committee CEN/TC 104 "Concrete and related products", 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 October 2003, and conflicting national standards shall be withdrawn at the latest by October 2003.

The European Standard is one of a series dealing with products and systems for the protection and repair of concrete structures:

EN 12617-1, *Products and systems for the protection and repair of concrete structures - Test methods - Part 1: Determination of linear shrinkage for polymers and surface protection systems (SPS).*

EN 12617-2, *Products and systems for the protection and repair of concrete structures - Test methods - Determination of shrinkage of polymer for injection products - Part 2: Shrinkage of crack injection product formulated with polymer binder: volumetric shrinkage.*

EN 12617-3, *Products and systems for the protection and repair of concrete structures - Test methods - Part 3: Determination of early age linear shrinkage for structural bonding agents.*

EN 12617-4, *Products and systems for the protection and repair of concrete structures - Test methods - Part 4: Determination of shrinkage and expansion.*

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.

1 Scope

This European Standard specifies a method for determining the linear shrinkage of solvent free multicomponent cold curing reactive resins for the protection and repair of concrete structures.

NOTE The method is not suitable for rubber, elastic and very fast curing products. Rubber and elastic products show relaxation effects and can dissipate stress to the ground. For testing very fast curing products the pot life should be long enough for mixing and preparing the test specimens.

2 Normative references

This European Standard incorporates by dated or 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 1504-1, *Products and systems for the protection and repair of concrete structures – Definitions, requirements, quality control and evaluation of conformity – Part 1: Definitions*.

EN ISO 15528, *Paints, varnishes and raw materials for paints and varnishes – Sampling (ISO 15528:2000)*.

EN ISO 1513, *Paints and varnishes – Examination and preparation of samples for testing (ISO 1513:1992)*.

3 Terms and definitions

For the purposes of this European Standard, the terms and definitions contained in EN 1504-1 and the following apply.

3.1 shrinkage

contraction in length or volume during curing of the material

3.2 shrinkage value

ratio of the gap width in mm after curing to the original length of 1 m

4 Apparatus

4.1 Two trough sections, of length $1\,000\text{ mm} \pm 1\text{ mm}$, made of 30 mm x 4 mm steel angle with ends fitted with flat ground flanges closed with matching bolted metal plates which also serve as supports, all shown in Figures 1 and 2.

4.2 Instrument to measure length to an accuracy of 0,05 mm (e.g. slide gauge).

4.3 Drying cabinet maintained at $(70 \pm 2)^\circ\text{C}$.