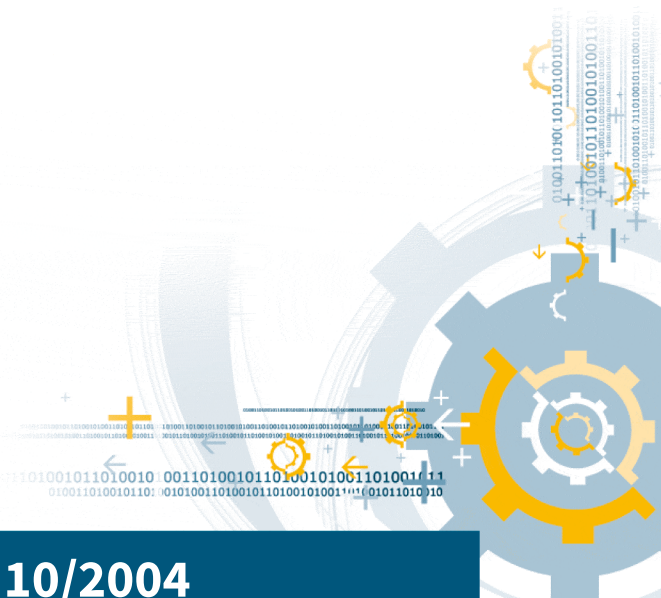




Institut luxembourgeois de la normalisation
de l'accréditation, de la sécurité et qualité
des produits et services

ILNAS-EN 1504-2:2004



National Foreword

This European Standard EN 1504-2:2004 was adopted as Luxembourgish Standard ILNAS-EN 1504-2:2004.

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English version

Products and systems for the protection and repair of concrete structures - Definitions, requirements, quality control and evaluation of conformity - Part 2: Surface protection systems for concrete

Produits et systèmes pour la protection et la réparation de structures en béton - Définitions, prescriptions, maîtrise de la qualité et évaluation de la conformité - Partie 2: Systèmes de protection de surface pour béton

Produkte und Systeme für den Schutz und die Instandsetzung von Betontragwerken - Definitionen, Anforderungen, Qualitätsüberwachung und Beurteilung der Konformität - Teil 2: Oberflächenschutzsysteme für Beton

This European Standard was approved by CEN on 30 July 2004.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



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Foreword

This document (EN 1504-2:2004) has been prepared by Technical Committee CEN/TC 104 “Concrete and related products”, the secretariat of which is held by DIN.

It has been developed by sub-committee 8 “Products and systems for the protection and repair of concrete structures”, 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 April 2005, and conflicting national standards shall be withdrawn at the latest by December 2008.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive (89/106/EC).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

This Part of EN 1504 does not supersede any other European Standard.

This European Standard is one of a series of standards on products and systems for the repair and protection of concrete structures as listed below:

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.*

prEN 1504-3¹⁾, *Products and systems for the protection and repair of concrete structures — Definitions, requirements, quality control and evaluation of conformity — Part 3: Structural and non-structural repair.*

EN 1504-4, *Products and systems for the protection and repair of concrete structures — Definitions, requirements, quality control and evaluation of conformity — Part 4: Structural bonding.*

EN 1504-5, *Products and systems for the protection and repair of concrete structures — Definitions, requirements, quality control and evaluation of conformity — Part 5: Concrete injection.*

prEN 1504-6¹⁾, *Products and systems for the protection and repair of concrete structures — Definitions, requirements, quality control and evaluation of conformity — Part 6: Anchoring of reinforcing steel bar.*

prEN 1504-7¹⁾, *Products and systems for the protection and repair of concrete structures — Definitions — Requirements — Quality control and evaluation of conformity — Part 7: Reinforcement corrosion protection.*

EN 1504-8, *Products and systems for the protection and repair of concrete structures — Definitions, requirements, quality control and evaluation of conformity — Part 8: Quality control and evaluation of conformity.*

ENV 1504-9²⁾, *Products and systems for the protection and repair of concrete structures — Definitions, requirements, quality control and evaluation of conformity — Part 9: General principles for the use of products and systems.*

1) To be published.

2) ENV 1504-9 will have to be modified when adopted as EN according to finalisation of this standard.

EN 1504-10, *Products and systems for the protection and repair of concrete structures — Definitions — Requirements — Quality control and evaluation of conformity — Part 10: Site application of products and systems and quality control of the works.*

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

Introduction

This document gives specifications for products and systems for the repair and protection of concrete structures. The test methods to which the specifications refer are the subject of separate standards.

Surface protection systems are used as “methods” for the following "principles" presented in ENV 1504-9:

- | | |
|-----------------------|--|
| for Principle 1 (PI): | Protection against Ingress |
| | 1.1 hydrophobic impregnation (H) |
| | 1.2 impregnation (I) |
| | 1.3 coating (C) |
| for Principle 2 (MC): | Moisture Control |
| | 2.1 hydrophobic impregnation (H) |
| | 2.2 coating (C) |
| for Principle 5 (PR) | Physical Resistance/Surface Improvement |
| | 5.1 coating (C) |
| | 5.2 impregnation (I) |
| for Principle 6 (RC): | Resistance to Chemicals |
| | 6.1 coating (C) |
| for Principle 8 (IR): | Increasing Resistivity by Limiting moisture content: |
| | 8.1 hydrophobic impregnation (H): |
| | 8.2 coating (C) |

1 Scope

This document specifies requirements for the identification, performance (including durability aspects), safety and evaluation of conformity of products and systems to be used for surface protection of concrete, to increase the durability of concrete and reinforced concrete structures, as well as for new concrete and for maintenance and repair work.

The surface protective methods covered by this document are the following:

- hydrophobic impregnation;
- impregnation;
- coating.

Flooring systems in buildings which are not intended to protect or reinstate the integrity of a concrete structure are standardised in EN 13813.

When products and systems complying with this standard are used in flooring applications that involve substantial mechanical loading, they should also satisfy the requirements of EN 13813.

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 206-1, *Concrete — Part 1: Specification, performance, production and conformity.*

EN 1015-3, *Methods of test for mortar for masonry — Part 3: Determination of consistence of fresh mortar (by flow table).*

EN 1015-6, *Methods of test for mortar for masonry — Part 6: Determination of bulk density of fresh mortar.*

EN 1015-7, *Methods of test for mortar for masonry — Part 7: Determination of air content of fresh mortar.*

EN 1062-3, *Paints and varnishes — Coating materials and coating systems for exterior masonry and concrete — Part 3: Determination and classification of liquid-water transmission rate (permeability).*

EN 1062-6, *Paints and varnishes — Coating materials and coating systems for exterior masonry and concrete — Part 6: Determination of carbon dioxide permeability.*

EN 1062-7, *Paints and varnishes — Coating materials and coating systems for exterior masonry and concrete — Part 7: Determination of crack bridging properties.*

EN 1062-11:2002, *Paints and varnishes — Coating materials and coating systems for exterior masonry and concrete — Part 11: Methods of conditioning before testing.*

EN 1081, *Resilient floor coverings — Determination of the electrical resistance.*

EN 1240, *Adhesives — Determination of hydroxyl value and/or hydroxyl content.*

EN 1242, *Adhesives — Determination of isocyanate content.*

EN 1504-1:1998, *Products and systems for the protection and repair of concrete structures — Definitions, requirements, quality control and evaluation of conformity — Part 1: Definitions.*