

**Ductile iron pipes, fittings and accessories -
External cement mortar coating for pipes -
Requirements and test methods**

Ductile iron pipes, fittings and accessories - External
cement mortar coating for pipes - Requirements and
test methods

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 15542:2008 sisaldab Euroopa standardi EN 15542:2008 ingliskeelset teksti.

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English Version

Ductile iron pipes, fittings and accessories - External cement
mortar coating for pipes - Requirements and test methods

Tuyaux, raccords et accessoires en fonte ductile -
Revêtement extérieur en mortier de ciment pour tuyaux -
Prescriptions et méthodes d'essai

Rohre, Formstücke und Zubehör aus duktilem Gusseisen -
Zementmörtelumhüllung von Rohren - Anforderungen und
Prüfverfahren

This European Standard was approved by CEN on 7 February 2008.

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Foreword

This document (EN 15542:2008) has been prepared by Technical Committee CEN/TC 203 “Cast iron pipes, fittings and their joints”, 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of an identical text or by endorsement, at the latest by September 2008, and conflicting national standards shall be withdrawn at the latest by September 2008.

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Introduction

This European Standard is in conformity with the general requirements already established by CEN/TC 164 in the field of water supply (e.g. potable water) and CEN/TC 165 in the field of waste water.

In respect of potential adverse effects on the quality of water intended for human consumption, caused by the product covered by this European Standard:

- a) this European Standard provides no information as to whether the product may be used without restriction in any of the member states of the EU or EFTA;
- b) it should be noted that, while awaiting the adoption of verifiable European criteria, existing national regulations concerning the use and/or the characteristics of this product remain in force.

1 Scope

This European Standard defines the requirements and test methods applicable to factory applied cement mortar coatings for the external corrosion protection of ductile iron pipes conforming to EN 545, EN 598 and EN 969 for use at operating temperatures up to 50 °C, and for soil conditions according to Annex D.2 of EN 545:2006.

Special activities on site such as joint protection, tapping, clamping, etc. could affect the corrosion protection properties of the cement mortar coating. These operations should be covered in the laying instructions supplied by the manufacturers of pipes, clamps, house connection saddles, etc. and any relevant users' procedures. Such instructions are not part of this European Standard.

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 197-1, *Cement - Part 1: Composition, specifications and conformity criteria for common cements*

EN 197-2, *Cement - Part 2: Conformity evaluation*

EN 545:2006, *Ductile iron pipes, fittings, accessories and their joints for water pipelines - Requirements and test methods*

EN 598, *Ductile iron pipes, fittings, accessories and their joints for sewerage applications - Requirements and test methods*

EN 969, *Ductile iron pipes, fittings, accessories and their joints for gas pipelines - Requirements and test methods*

EN 13055-1, *Lightweight aggregates - Part 1: Lightweight aggregates for concrete, mortar and grout*

EN 14020-1, *Reinforcements - Specification for textile glass rovings - Part 1: Designation*

EN 14020-2, *Reinforcements - Specification for textile glass rovings - Part 2: Methods of test and general requirements*

EN ISO 527-1, *Plastics - Determination of tensile properties - Part 1: General principles (ISO 527-1:1993 including Corr 1:1994)*

EN ISO 527-2, *Plastics - Determination of tensile properties - Part 2: Test conditions for moulding and extrusion plastics (ISO 527-2:1993 including Corr 1:1994)*

EN ISO 1183-1, *Plastics - Methods for determining the density of non-cellular plastics - Part 1: Immersion method, liquid pycnometer method and titration method (ISO 1183-1:2004)*

EN ISO 4624:2003, *Paints and varnishes - Pull-off test for adhesion (ISO 4624:2002)*

ISO 695, *Glass - Resistance to attack by a boiling aqueous solution of mixed alkali - Method of test and classification*

ISO 719, *Glass - Hydrolytic resistance of glass grains at 98 °C - Method of test and classification*

ISO 2591-1, *Test sieving - Part 1: Methods using test sieves of woven wire cloth and perforated metal plate*

ISO 3310-1, *Test sieves - Technical requirements and testing - Part 1: Test sieves of metal wire cloth*

3 Terms and definitions

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

3.1

ductile iron

cast iron used for pipes, fittings and accessories in which graphite is present substantially in spheroidal form

3.2

cement mortar coating

multi-layer external coating system for ductile iron pipes, principally consisting of the two following layers:

- zinc coating;
- cement mortar layer.

Polymer additive, primer, pigments, surface tissue or top coatings may be used according to the method of application of the coating used by the different manufacturers

3.3

zinc coating

coating intended to protect the ductile iron and applied to the pipe by means of a thermal spraying process

3.4

primer

two-component resin which cures by exposure to moisture and serves as adhesive to the cement mortar layer

3.5

cement mortar layer

blast furnace slag cement mortar system reinforced with fibres. It may be polymer modified and/or pigmented, and may be covered with a layer of surface tissue

3.6

fibres

inert plastic fibres, e.g. polypropylene fibres, or alkali resistant glass fibres, e.g. AR-glass fibres, or special E-glass fibres which are used to reinforce the cement mortar layer

3.7

pigments

material added to the fresh cement mortar in order to identify the medium to be transported

3.8

polymer additive

organic material added to the fresh cement mortar in order to improve the workability and to reduce the water/cement ratio and to improve the performance of the cement mortar layer

3.9

surface tissue

polyolefin tissue in form of strip with a net-like structure, which may be applied to the cement mortar layer

3.10

top coating

coating applied to the cement mortar layer in order to identify the medium to be transported