

## **Ductile iron pipes, fittings, accessories and their joints for water pipelines - Requirements and test methods**

Ductile iron pipes, fittings, accessories and their  
joints for water pipelines - Requirements and test  
methods

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 545:2006 sisaldab Euroopa standardi EN 545:2006 ingliskeelset teksti.	This Estonian standard EVS-EN 545:2006 consists of the English text of the European standard EN 545:2006.
Käesolev dokument on jõustatud 21.12.2006 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.	This document is endorsed on 21.12.2006 with the notification being published in the official publication of the Estonian national standardisation organisation.
Standard on kättesaadav Eesti standardiorganisatsioonist.	The standard is available from Estonian standardisation organisation.

<b>Käsitlusala:</b> This European Standard specifies the requirements and associated test methods applicable to ductile iron pipes, fittings, accessories and their joints for the construction of pipelines: - to convey water (e. g. potable water); - with or without pressure; - to be installed below or above ground.	<b>Scope:</b> This European Standard specifies the requirements and associated test methods applicable to ductile iron pipes, fittings, accessories and their joints for the construction of pipelines: - to convey water (e. g. potable water); - with or without pressure; - to be installed below or above ground.
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**Võtmesõnad:** cast iron, pip, pipes, pipework systems, quality assurance, sa type pipe units, specification (approval), specifications, spheroidal-graphite cast-iro, spheroidal-graphite cast-iron, st type pipe unit, tables (data), testing, tubes, water pipelines, water practice

English Version

## Ductile iron pipes, fittings, accessories and their joints for water pipelines - Requirements and test methods

Tuyaux, raccords et accessoires en fonte ductile et leurs assemblages pour canalisations d'eau - Prescriptions et méthodes d'essai

Rohre, Formstücke, Zubehörteile aus duktilem Gusseisen und ihre Verbindungen für Wasserleitungen - Anforderungen und Prüfverfahren

This European Standard was approved by CEN on 11 October 2006.

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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



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## Foreword

This document (EN 545:2006) 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 May 2007, and conflicting national standards shall be withdrawn at the latest by May 2007.

This document supersedes EN 545:2002.

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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

## Introduction

This standard is in conformity with the general requirements already established by CEN/TC 164 in the field of water supply.

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

- this 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;
- 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 specifies the requirements and associated test methods applicable to ductile iron pipes, fittings, accessories and their joints for the construction of pipelines:

- to convey water (e. g. potable water);
- with or without pressure;
- to be installed below or above ground.

This standard is applicable to pipes, fittings and accessories which are:

- manufactured with socketed, flanged or spigot ends;
- normally delivered externally and internally coated;
- suitable for fluid temperatures between 0 °C and 50 °C, excluding frost.

This standard covers pipes, fittings and accessories cast by any type of foundry process or manufactured by fabrication of cast components, as well as corresponding joints, in a size range extending from DN 40 to DN 2 000, inclusive.

This standard specifies requirements for materials, dimensions and tolerances, mechanical properties and standard coatings of ductile iron pipes and fittings. It also gives performance requirements for all components including joints. Joint design and gasket shapes are outside the scope of this standard.

NOTE In this standard, all pressures are relative pressures, expressed in bars (100 kPa = 1 bar).

## 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 196-1, *Methods of testing cement — Part 1: Determination of strength*

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

EN 681-1, *Elastomeric seals — Materials requirements for pipe joint seals used in water and drainage applications — Part 1: Vulcanized rubber*

EN 805, *Water supply — Requirements for systems and components outside buildings*

EN 1092-2, *Flanges and their joints — Circular flanges for pipes, valves, fittings and accessories, PN designated — Part 2: Cast iron flanges*

EN 10002-1, *Metallic materials — Tensile testing — Part 1: Method of test at ambient temperature*

EN ISO 4016, *Hexagon head bolts — Product grade C (ISO 4016:1999)*

EN ISO 4034, *Hexagon nuts — Product grade C (ISO 4034:1999)*

EN ISO 6506-1, *Metallic materials — Brinell hardness test — Part 1: Test method (ISO 6506-1:2005)*

EN ISO 7091, *Plain washers — Normal series — Product grade C (ISO 7091:2000)*