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Standards

Irish Standard  
I.S. EN 545:2010

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

## I.S. EN 545:2010

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

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<p>Údarás um Chaighdeáin Náisiúnta na hÉireann</p>					

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 12 August 2010.

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## Foreword

This document (EN 545:2010) 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of an identical text or by endorsement, at the latest by **March 2011**, and conflicting national standards shall be withdrawn at the latest by **March 2011**.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 545:2006.

In this standard Annex A is normative and Annexes B, C, D, E and F are informative.

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 products covered by this standard:

- this standard provides no information as to whether the products 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 these products remain in force.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, 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 the United Kingdom.



## 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 outside buildings:

- to convey different types of water (e.g. raw water, treated water, re-used water) for all types of applications (e.g. water intended for human consumption, for fire protection, for snow making, for irrigation, for hydro-electricity etc.);
- with or without pressure;
- to be installed below or above ground.

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

- manufactured with socketed, flanged or spigot ends;
- supplied externally and internally coated;
- suitable for fluid temperatures between 0 °C and 50 °C, excluding frost;
- not intended for use in areas subject to reaction to fire regulations.

This does not preclude special arrangements for the products to be used at higher temperatures.

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

This European 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.

In addition, reference is made to the minimum performance requirements of couplings, flange adaptors and saddles manufactured for use with ductile iron pipes and fittings.

NOTE In this European 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 — Material requirements for pipe joint seals used in water and drainage applications — Part 1: Vulcanized rubber*

EN 805:2000, *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*

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