BS EN 14525:2022

Ductile iron and steel wide tolerance couplings and flange adaptors for use with pipes of different materials: ductile iron, Grey iron, steel, PVC-U, PVC-O, PE, fibre-cement
National foreword

This British Standard is the UK implementation of EN 14525:2022. It supersedes BS EN 14525:2004, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PSE/10, Iron pipes and fittings.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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European foreword

This document (EN 14525:2022) has been prepared by Technical Committee CEN/TC 203 “Cast iron pipes, fittings and accessories”, 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of an identical text or by endorsement, at the latest by April 2023, and conflicting national standards shall be withdrawn at the latest by April 2023.

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

This document supersedes EN 14525:2004.

The significant changes made since the previous edition EN 14525:2004 are:

— allowance of steel as material (as EN 12842);
— introduction of type test for pipes made from ductile iron in delivery conditions;
— introduction of long-term testing for pipes made from PVC-U and PE (as per EN 12842);
— correction on pressure testing depending on pipe material (as per EN 12842);
— wording and paragraphs harmonized with EN 12842 and EN 545.

This document 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 document:

— this document 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 these products remain in force.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations 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, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.
1 Scope

This document specifies the requirements and associated test methods applicable to wide tolerance ductile iron and steel (restricted sizes for steel) couplings, stepped/reducing couplings and flange adaptors intended for use with pipe components made from a number of pipe materials (ductile iron, grey iron, PE in conformity with EN 12201-1 to EN 12201-5, PVC-U in conformity with EN ISO 1452-1 to EN ISO 1452-5, PVC-O in conformity with EN 17176-1 to EN 17176-5, steel, fibre-cement), for providing a leak tight seal over a wide range of pipe outside diameters:

— to convey water (e.g. water intended for human consumption);

— with or without pressure;

— to be installed below or above ground, inside or outside buildings.

This document is not intended to cover sewerage or gas applications, where additional requirements may be necessary.

This document specifies requirements for materials, dimensions and tolerances, mechanical properties and standard coatings of products.

This document covers wide tolerance couplings, stepped/reducing couplings and flange adaptors:

— manufactured with socketed or flanged ends;

— supplied externally and internally coated;

— suitable for pipes made from ductile iron in conformity with EN 545, grey iron, PE in conformity with EN 12201-1 to EN 12201-5, PVC-U in conformity with EN ISO 1452-1 to EN ISO 1452-5, PVC-O in conformity with EN ISO 1452-1 to EN ISO 1452-5, steel, fibre-cement in a size range extending from DN 40 to DN 800, for an allowable operating pressure (PFA) up to 16 bar, for fluid temperatures between 0 °C and 25 °C excluding frost. For higher temperatures, (up to 45 °C for PVC-U and PVC-O or 40 °C for PE) the PFA is derated as given in EN ISO 1452 and EN 12201;

— not intended for use in areas subjected to reaction to fire regulations.

NOTE 1 This does not preclude special arrangements for the products to be used at higher temperatures. Temperature limitations and pressure limitations are those coming from the PVC-U, PVC-O or PE pipes.

This document covers ductile iron couplings, stepped/reducing couplings and flange adaptors 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 800.

As long as no equivalent European Standard exists for steel accessories, this document also covers couplings and flange adaptors which are fabricated partly or entirely from steel as well as corresponding joints, in a size range extending from DN 600 to DN 800.

This document specifies requirements for materials, dimensions and tolerances, mechanical properties and standard coatings. It also gives minimum performance requirements for all components, including restrained and non-restrained flexible joints. Joint design and gasket shapes are outside the scope of this document.

NOTE 2 PFA can be limited depending on pipe materials effectively connected.

NOTE 3 In this document, if not specified, all pressures are relative gauge pressures, expressed in bars (100 kPa = 1 bar).