



NSAI
Standards

Irish Standard
I.S. EN 1555-2:2010

Plastics piping systems for the supply of gaseous fuels - Polyethylene (PE) - Part 2: Pipes

I.S. EN 1555-2:2010

Incorporating amendments/corrigenda/National Annexes issued since publication:

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I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

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SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

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Údarás um Chaighdeáin Náisiúnta na hÉireann

National Foreword

This Irish Standard is the official English language version of I.S. EN 1555-2:2010, prepared by Technical Committee CEN/TC 155, "Plastics piping systems and ducting systems". This document supersedes I.S. EN 1555-2:2003.

Where a part of this EN allows for a choice to be made at national level this is addressed in a National Annex.

If this standard has been changed (revised/amended/corrected) and the National Annex has yet to be revised to account for the change(s), the National Annex for the previous version is available. Judgement by a competent person must be applied if using guidance contained therein.

In line with international standards practice the decimal point is shown as a comma (,) throughout this document.

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English Version

Plastics piping systems for the supply of gaseous fuels - Polyethylene (PE) - Part 2: Pipes

Systèmes de canalisations en plastique pour la distribution
de combustibles gazeux - Polyéthylène (PE) - Partie 2 :
Tubes

Kunststoff-Rohrleitungssysteme für die Gasversorgung
Polyethylen (PE) - Teil 2: Rohre

This European Standard was approved by CEN on 30 July 2010.

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 CEN Management Centre 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 CEN Management Centre has the same status as the official versions.

CEN members are the national standards bodies of 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 United Kingdom.



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Foreword

This document (EN 1555-2:2010) has been prepared by Technical Committee CEN/TC 155 "Plastics piping systems and ducting systems", the secretariat of which is held by NEN.

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 1555-2:2002.

It has been prepared in liaison with Technical Committee CEN/TC 234 "Gas infrastructure".

System Standards are based on the results of the work being undertaken in ISO/TC 138 "Plastics pipes, fittings and valves for the transport of fluids", which is a Technical Committee of the International Organization for Standardization (ISO).

They are supported by separate standards on test methods to which references are made throughout the System Standard.

The System Standards are consistent with general standards on functional requirements and on recommended practice for installation.

EN 1555 consists of the following parts:

- EN 1555-1, *Plastics piping systems for the supply of gaseous fuels — Polyethylene (PE) — Part 1: General*;
- EN 1555-2, *Plastics piping systems for the supply of gaseous fuels — Polyethylene (PE) — Part 2: Pipes* (this standard);
- EN 1555-3, *Plastics piping systems for the supply of gaseous fuels — Polyethylene (PE) — Part 3: Fittings*;
- prEN 1555-4, *Plastics piping systems for the supply of gaseous fuels — Polyethylene (PE) — Part 4: Valves*;
- EN 1555-5, *Plastics piping systems for the supply of gaseous fuels — Polyethylene (PE) — Part 5: Fitness for purpose of the system*;
- CEN/TS 1555-7, *Plastics piping systems for the supply of gaseous fuels — Polyethylene (PE) — Part 7: Guidance for assessment of conformity*.

NOTE EN 12007-2:2000 [1] prepared by CEN/TC 234 "Gas infrastructure" deals with the recommended practice for installation of plastics pipes system in accordance with EN 1555 (all parts).

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.

Introduction

The System Standard, of which this is Part 2, specifies the requirements for a piping system and its components made from polyethylene (PE) and which is intended to be used for the supply of gaseous fuels.

Requirements and test methods for material and components, other than pipes, are specified in EN 1555-1, EN 1555-3 [7] and prEN 1555-4 [8].

Characteristics for fitness for purpose are covered in EN 1555-5. CEN/TS 1555-7 [2] gives guidance for assessment of conformity. Recommended practice for installation is given in EN 12007-2:2000 [1] prepared by CEN/TC 234.

This part of EN 1555 covers the characteristics of pipes.

1 Scope

This part of EN 1555 specifies the characteristics of pipes made from polyethylene (PE) for piping systems in the field of the supply of gaseous fuels.

It also specifies the test parameters for the test methods referred to in this standard.

In conjunction with Parts 1 and 3 to 5 of EN 1555, it is applicable to PE pipes, their joints and to joints with components of PE and other materials intended to be used under the following conditions:

- a) a maximum operating pressure, MOP, up to and including 10 bar ¹⁾;
- b) an operating temperature of 20 °C as reference temperature.

NOTE 1 For other operating temperatures, derating coefficients should be used, see EN 1555-5.

EN 1555 covers a range of maximum operating pressures and gives requirements concerning colours and additives.

It covers three types of pipe:

- PE pipes (outside diameter d_n) including any identification stripes;
- PE pipes with co-extruded layers on either or both the outside and/or inside of the pipe (total outside diameter d_n) as specified in Annex A, where all layers have the same MRS rating;
- PE pipes (outside diameter d_n) with a peelable, contiguous thermoplastics additional layer on the outside of the pipe ('coated pipe') as specified in Annex B.

NOTE 2 It is the responsibility of the purchaser or specifier to make the appropriate selections from these aspects, taking into account their particular requirements and any relevant national regulations and installation practices or codes.

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 1555-1:2010, *Plastics piping systems for the supply of gaseous fuels — Polyethylene (PE) — Part 1: General*

EN 1555-5, *Plastics piping systems for the supply of gaseous fuels — Polyethylene (PE) — Part 5: Fitness for purpose of the system*

EN 12106, *Plastics piping systems — Polyethylene (PE) pipes — Test method for the resistance to internal pressure after application of squeeze-off*

EN ISO 1133:2005, *Plastics — Determination of the melt mass-flow rate (MFR) and the melt volume-flow rate (MVR) of thermoplastics (ISO 1133:2005)*

EN ISO 1167-1:2006, *Thermoplastics pipes, fittings and assemblies for the conveyance of fluids — Determination of the resistance to internal pressure — Part 1: General method (ISO 1167-1:2006)*

1) 1 bar = 0,1 MPa.

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