



**NSAI**  
Standards

Irish Standard  
I.S. EN 1555-4:2011

# Plastics piping systems for the supply of gaseous fuels - Polyethylene (PE) - Part 4: Valves

## I.S. EN 1555-4:2011

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

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

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

S.R. xxx: Standard Recommendation - recommendation based on the consensus of an expert panel and subject to public consultation.

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

*This document replaces:*  
EN 1555-4:2002

*This document is based on:*  
EN 1555-4:2011

*Published:*  
23 May, 2011

This document was published  
under the authority of the NSAI  
and comes into effect on:  
23 May, 2011

ICS number:  
23.060.99

**NSAI**  
1 Swift Square,  
Northwood, Santry  
Dublin 9

T +353 1 807 3800  
F +353 1 807 3838  
E standards@nsai.ie  
W NSAI.ie

**Sales:**  
T +353 1 857 6730  
F +353 1 857 6729  
W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

English Version

## Plastics piping systems for the supply of gaseous fuels - Polyethylene (PE) - Part 4: Valves

Systèmes de canalisations en plastique pour la distribution  
de combustibles gazeux - Polyéthylène (PE) - Partie 4 :  
Robinets

Kunststoff-Rohrleitungssysteme für die Gasversorgung -  
Polyethylen (PE) - Teil 4: Armaturen

This European Standard was approved by CEN on 17 March 2011.

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-CENELEC 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-CENELEC 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.



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

**Management Centre: Avenue Marnix 17, B-1000 Brussels**

## Contents

Page

Foreword.....	3
Introduction .....	4
1 Scope .....	5
2 Normative references .....	5
3 Terms and definitions, symbols and abbreviations.....	6
4 Material .....	8
4.1 PE compound.....	8
4.2 Material for non-polyethylene parts.....	8
5 General characteristics .....	9
5.1 Appearance of the valve .....	9
5.2 Colour .....	9
5.3 Design .....	9
6 Geometrical characteristics.....	10
6.1 General.....	10
6.2 Measurement of dimensions .....	10
6.3 Dimensions of spigot ends for valves .....	10
6.4 Dimensions of valves with electrofusion sockets.....	10
6.5 Dimensions of the operating device .....	10
7 Mechanical characteristics of assembled valves.....	11
7.1 General.....	11
7.2 Requirements .....	11
8 Physical characteristics.....	15
8.1 Conditioning.....	15
8.2 Requirements .....	15
9 Performance requirements .....	16
10 Marking .....	16
10.1 General.....	16
10.2 Minimum required marking.....	16
10.3 Additional marking .....	17
11 Delivery conditions.....	17
Annex A (normative) Determination of the leaktightness of seat and packing.....	18
A.1 General.....	18
A.2 Test method.....	18

## Foreword

This document (EN 1555-4:2011) 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 November 2011, and conflicting national standards shall be withdrawn at the latest by November 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 1555-4:2002.

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

System Standards are based on the results of the work 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*;
- EN 1555-3, *Plastics piping systems for the supply of gaseous fuels — Polyethylene (PE) — Part 3: Fittings*;
- EN 1555-4, *Plastics piping systems for the supply of gaseous fuels — Polyethylene (PE) — Part 4: Valves* (this standard);
- 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 the 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 4, 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 valves, are specified in EN 1555-1, EN 1555-2 and EN 1555-3.

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 valves.

## 1 Scope

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

NOTE 1 Valves made from other material than polyethylene designed for the supply of gaseous fuels conforming to the relevant standards are permitted to be used in PE piping system according to EN 1555 provided they have relevant PE connection for butt fusion or electrofusion ends (see EN 1555-3).

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

In conjunction with Parts 1, 2, 3 and 5 of EN 1555, it is applicable to PE valves, 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 <sup>1)</sup>;
- b) an operating temperature of 20 °C as reference temperature;

NOTE 2 For other operating temperatures, derating coefficients should be used, see EN 1555-5.

- c) an operating temperature between -20 °C and +40 °C.

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

NOTE 3 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.

It is applicable to bi-directional valves with spigot end or electrofusion socket intended to be fused with PE pipes conforming to EN 1555-2 without any fittings or with PE fittings conforming to EN 1555-3.

This European Standard covers valves for pipes with a nominal outside diameter  $d_n \leq 315$  mm.

## 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 682, *Elastomeric Seals — Materials requirements for seals used in pipes and fittings carrying gas and hydrocarbon fluids*

EN 736-1:1995, *Valves — Terminology — Part 1: Definition of types of valves*

EN 736-2:1997, *Valves — Terminology — Part 2: Definition of components of valves*

EN 744:1995, *Plastics piping and ducting systems — Thermoplastics pipes — Test method for resistance to external blows by the round-the-clock method*

EN 1555-1:2010, *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*

---

1) 1 bar = 0,1 MPa.

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

- 
- [Looking for additional Standards? Visit Intertek Inform Infostore](#)
  - [Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation](#)
-