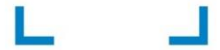


**EN 15698-1:2019**

 **NBN**

**NBN EN 15698-1:2019**



---

**District heating pipes - Bonded twin pipe systems for directly buried hot water networks - Part 1: Factory made twin pipe assembly of steel service pipes, polyurethane thermal insulation and one casing of polyethylene**

---

Valid from 28-11-2019

Replaces NBN EN 15698-1:2009

ICS: 23.040.07, 23.040.10



EUROPEAN STANDARD  
 NORME EUROPÉENNE  
 EUROPÄISCHE NORM

**EN 15698-1**

October 2019

ICS 23.040.07; 23.040.10

Supersedes EN 15698-1:2009

English Version

**District heating pipes - Bonded twin pipe systems for directly buried hot water networks - Part 1: Factory made twin pipe assembly of steel service pipes, polyurethane thermal insulation and one casing of polyethylene**

Tuyaux de chauffage urbain - Systèmes bloqués de tuyaux doubler pré-isolés pour les réseaux d'eau chaude enterrés directement - Assemblage de bitudes pout tube de service en acier, isolation thermique en polyuréthane et tube de protection en polyéthylène

Fernwärmerohre - Verbundmanteldoppelrohre für direkt erdverlegte Fernwärmenetze - Teil 1: Werkmäßig hergestelltes Verbund-Doppelrohrsystem, bestehend aus Stahl-Mediumrohr, Polyurethan-Wärmedämmung und einem Mantel aus Polyethylen

This European Standard was approved by CEN on 12 August 2019.

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, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

**EN 15698-1:2019 (E)****Contents**

Page

<b>European foreword</b> .....	<b>3</b>
<b>Introduction</b> .....	<b>4</b>
<b>1 Scope</b> .....	<b>5</b>
<b>2 Normative references</b> .....	<b>5</b>
<b>3 Terms and definitions</b> .....	<b>5</b>
<b>4 Requirements</b> .....	<b>5</b>
<b>5 Test methods</b> .....	<b>9</b>
<b>6 Marking</b> .....	<b>12</b>
<b>Annex A (informative) Guidelines for inspection and testing</b> .....	<b>13</b>
<b>Annex B (informative) Waste treatment and recycling</b> .....	<b>14</b>
<b>Bibliography</b> .....	<b>15</b>

## European foreword

This document (EN 15698-1:2019) has been prepared by Technical Committee CEN/TC 107 “Prefabricated district heating and district cooling pipe system”, the secretariat of which is held by DS.

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 2020, and conflicting national standards shall be withdrawn at the latest by April 2020.

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 15698-1:2009.

In comparison with the previous edition, the main changes in this new edition of EN 15698-1 are:

- editorial changes to the new structure of standards prepared by the Technical Committee CEN/TC 107.

EN 15698 is currently composed of the following parts:

- *District heating pipes — Bonded twin pipe systems for directly buried hot water networks — Part 1: Factory made twin pipe assembly of steel service pipes, polyurethane thermal insulation and one casing of polyethylene;*
- *District heating pipes — Bonded twin pipe systems for directly buried hot water networks — Part 2: Factory made fitting and valve assemblies of steel service pipes, polyurethane thermal insulation and one casing of polyethylene.*

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, Turkey and the United Kingdom.

**EN 15698-1:2019 (E)****Introduction**

This document has been elaborated as a complement to the standards on bonded pipe systems for buried hot water networks using steel service pipe and polyurethane foam thermal insulation and outer casing of polyethylene.

These standards are:

- EN 253, *District heating pipes — Bonded single pipe systems for directly buried hot water networks — Factory made pipe assembly of steel service pipe, polyurethane thermal insulation and outer casing of polyethylene;*
- EN 448, *District heating pipes — Bonded single pipe systems for directly buried hot water networks — Factory made fitting assemblies of steel service pipes, polyurethane thermal insulation and a casing of polyethylene;*
- EN 488, *Bonded single pipe systems for directly buried hot water networks — Factory made steel valve assembly for steel service pipes, polyurethane thermal insulation and a casing of polyethylene;*
- EN 489-1, *District heating pipes — Bonded single and twin pipe systems for buried hot water networks — Part 1: Joint casing assemblies and thermal insulation for hot water networks in accordance with EN 13941-1;*
- EN 13941-1, *District heating pipes — Design and installation of thermal insulated bonded single and twin pipe systems for directly buried hot water networks — Part 1: Design;*
- EN 13941-2, *District heating pipes — Design and installation of thermal insulated bonded single and twin pipe systems for directly buried hot water networks — Part 2: Installation;*
- EN 14419, *District heating pipes — Bonded single and twin pipe systems for directly buried hot water networks — Surveillance systems;*
- EN 15632 (all parts), *District heating pipe — Pre-insulated flexible pipe systems;*
- EN 15698-2, *District heating pipes — Bonded twin pipe systems for directly buried hot water networks — Part 2: Factory made fitting and valve assemblies of steel service pipes, polyurethane thermal insulation and one casing of polyethylene*
- EN 17248, *District heating and district cooling pipe systems - Terms and definitions.*

Waste management and recycling of materials is dealt with in Annex B.

## 1 Scope

This document specifies requirements and test methods for straight lengths of factory made thermally insulated bonded twin pipe assemblies for directly buried hot water networks in accordance with EN 13941-1, comprising two steel service pipes, rigid polyurethane foam thermal insulation and one casing of polyethylene.

The pipe assembly can also include the following additional elements: measuring wires, spacers and diffusion barriers.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 253, *District heating pipes — Bonded single pipe systems for directly buried hot water networks — Factory made pipe assembly of steel service pipe, polyurethane thermal insulation and a casing of polyethylene*

EN 13941-1, *District heating pipes — Design and installation of thermal insulated bonded single and twin pipe systems for directly buried hot water networks — Part 1: Design*

EN 14419, *District heating pipes — Bonded single and twin pipe systems for directly buried hot water networks — Surveillance systems*

EN 17248, *District heating and district cooling pipe systems — Terms and definitions*

EN ISO 3126, *Plastics piping systems — Plastics components — Determination of dimensions (ISO 3126)*

## 3 Terms and definitions

For the purpose of this document, the terms and definitions given in EN 17248 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

## 4 Requirements

### 4.1 General

Unless otherwise specified, the requirements shall be valid for each single measurement.

For information on suitable guidelines for inspection of manufactured bonded twin pipe assemblies see Annex A.

### 4.2 Steel service pipe

The material of the steel service pipes shall be as specified in EN 13941-1. Dimensions and surface condition of the steel service pipes shall be as specified in EN 253.