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# Plastics piping systems for hot and cold water installations - Polypropylene (PP) - Part 1: General (ISO 15874-1:2013)

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## I.S. EN ISO 15874-1:2013

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English Version

## Plastics piping systems for hot and cold water installations - Polypropylene (PP) - Part 1: General (ISO 15874-1:2013)

Systèmes de canalisations en plastique pour les  
installations d'eau chaude et froide - Polypropylène (PP) -  
Partie 1: Généralités (ISO 15874-1:2013)

Kunststoff-Rohrleitungssysteme für die Warm- und  
Kaltwasserinstallation - Polypropylen (PP) - Teil 1:  
Allgemeines (ISO 15874-1:2013)

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## **Foreword**

This document (EN ISO 15874-1:2013) has been prepared by Technical Committee CEN/TC 155 “Plastics piping systems and ducting systems” the secretariat of which is held by NEN, in collaboration with Technical Committee ISO/TC 138 “Plastics pipes, fittings and valves for the transport of fluids”.

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of an identical text or by endorsement, at the latest by August 2013, and conflicting national standards shall be withdrawn at the latest by August 2013.

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.

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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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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**Plastics piping systems for hot and cold  
water installations — Polypropylene (PP) —**

**Part 1:**  
**General**

*Systèmes de canalisations en plastique pour les installations d'eau  
chaude et froide — Polypropylène (PP) —*

*Partie 1: Généralités*



Reference number  
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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

ISO 15874-1 was prepared by Technical Committee CEN/TC 155, *Plastics piping systems and ducting systems*, in collaboration with Technical Committee ISO/TC 138, *Plastics pipes, fittings and valves for the transport of fluids*, and Subcommittee SC 2, *Plastics pipes and fittings for water supplies*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 15874-1:2003 and ISO 15874-1:2003/Amd 1:2007), which has been technically revised. In 5.1, the material PP-RCT has been included.

ISO 15874 consists of the following parts<sup>1)</sup> under the general title *Plastics piping systems for hot and cold water installations — Polypropylene (PP)*:

- *Part 1: General*
- *Part 2: Pipes*
- *Part 3: Fittings*
- *Part 5: Fitness for purpose of the system*
- *Part 7: Guidance for the assessment of conformity* [Technical specification]

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1) For ancillary equipment separate standards can apply. Guidance on installation of plastics piping systems made from different materials intended to be used for hot and cold water installations is given by CEN/TR 12108 [1].

## Introduction

This part of ISO 15874 specifies the requirements for a piping system and its components when made from polypropylene (PP). The piping system is intended to be used for hot and cold water installations.

Regarding potential undesirable effects on the quality of water intended for human consumption, caused by the product covered by ISO 15874

- no information is provided as to whether the product can be used without restriction, and
- existing national regulations concerning the use and/or the characteristics of this product remain in force.

Requirements and test methods for components of the piping system are specified in ISO 15874-2 and ISO 15874-3. Characteristics for fitness of purpose (mainly for joints) are covered in ISO 15874-5. ISO/TS 15874-7 gives guidance for the assessment of conformity.

This part of ISO 15874 specifies the general aspects of the plastics piping system.

At the date of publication of this part of ISO 15874, the following system International Standards for piping systems of other plastics materials used for the same application are

ISO 15875, Plastics piping systems for hot and cold water installations — Crosslinked polyethylene (PE-X)

ISO 15876, Plastics piping systems for hot and cold water installations — Polybutylene (PB)

ISO 15877, Plastics piping systems for hot and cold water installations — Chlorinated poly(vinyl chloride) (PVC-C)

ISO 22391, Plastics piping systems for hot and cold water installations - Polyethylene of raised temperature resistance (PE-RT)

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# Plastics piping systems for hot and cold water installations — Polypropylene (PP) —

## Part 1: General

### 1 Scope

This part of ISO 15874 specifies the general aspects of polypropylene (PP) piping systems intended to be used for hot and cold water installations within buildings for the conveyance of water whether or not intended for human consumption (domestic systems), and for heating systems, under design pressures and temperatures according to the class of application (see Table 1).

It covers a range of service conditions (classes of application), design pressures and pipe dimension classes. Values of  $T_D$ ,  $T_{max}$  and  $T_{mal}$  in excess of those in Table 1 of this part of ISO 15874 do not apply.

**NOTE** 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 also specifies the test parameters for the test methods referred to in this part of ISO 15874.

In conjunction with the other parts of ISO 15874, this part of ISO 15874 is applicable to PP pipes, fittings, their joints and to joints with components of other plastics and non-plastics materials intended to be used for hot and cold water installations.

### 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 15874-2:2013, *Plastics piping systems for hot and cold water installations — Polypropylene (PP) — Part 2: Pipes*

ISO 15874-3, *Plastics piping systems for hot and cold water installations — Polypropylene (PP) — Part 3: Fittings*

ISO 472, *Plastics — Vocabulary*

ISO 1043-1, *Plastics — Symbols and abbreviated terms — Part 1: Basic polymers and their special characteristics*

ISO 4065, *Thermoplastics pipes — Universal wall thickness table*

### 3 Terms and definitions, symbols and abbreviated terms

For the purposes of this document, the terms and definitions given in ISO 472, ISO 1043-1 and the following apply.

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