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

**Part 2:
Pipes**

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

Partie 2: Tubes



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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 15874-2 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 15874-2:2003 and ISO 15874-2:2003/Amd 1:2007), which has been technically revised. In Clause 6, 6.2.2, Table 5, the material PP-RCT has been included, and Annex A, Table A.6, pipe dimensions have been extended to 160 mm.

ISO 15874 consists of the following parts¹⁾ 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]

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 when made from polypropylene (PP). The piping system is intended to be used for hot and cold water installations.

Regarding potential adverse 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;
- existing national regulations concerning the use and/or the characteristics of this product remain in force.

Requirements and test methods for material and components, other than pipes, are specified in ISO 15874-1 and ISO 15874-3. Characteristics for fitness for 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 characteristics of pipes.

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 2: Pipes

1 Scope

This part ISO 15874 specifies the requirements of pipes made from polypropylene (PP) for 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 operating pressures and temperatures appropriate to the class of application (see ISO 15874-1:2013, Table 1).

This part of ISO 15874 covers a range of service conditions (application classes), design pressures and pipe dimension classes. For values of T_D , T_{max} and T_{mal} in excess of those in Table 1 of ISO 15874-1:2013 do not apply.

NOTE 1 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, their joints and to joints with components of PP, other plastics and non-plastics materials intended to be used for hot and cold water installations.

It is applicable to pipes with or without (a) barrier layer(s).

NOTE 2 In the case of plastics pipes provided with a thin barrier layer, e.g. to prevent or greatly diminish the diffusion of gases and the transmission of light into or through the pipe wall, the design stress requirements are totally met by the base polymer (PP).

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 1133-1, *Plastics — Determination of the melt mass-flow rate (MFR) and the melt volume-flow rate (MVR) of thermoplastics — Part 1: Standard method*

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

ISO 1167-2 *Thermoplastics pipes, fittings and assemblies for the conveyance of fluids — Determination of the resistance to internal pressure — Part 2: Preparation of pipe test pieces*

ISO 2505 *Thermoplastics pipes — Longitudinal reversion — Test methods and parameters*

ISO 3126 *Plastics piping systems — Plastics components — Determination of dimensions*

ISO 4065:1996, *Thermoplastics pipes — Universal wall thickness table*

ISO 7686 *Plastics pipes and fittings — Determination of opacity*

ISO 9080 *Plastics piping and ducting systems — Determination of the long-term hydrostatic strength of thermoplastics materials in pipe form by extrapolation*