

English Version

**Plastics piping systems - Guidance for the installation inside
buildings of pressure piping systems for hot and cold water
intended for human consumption**

Systèmes de canalisations plastiques - Guide pour
l'installation à l'intérieur de structures de bâtiments de
systèmes de canalisations sous pression pour l'eau chaude
et l'eau froide destinées à la consommation humaine

Kunststoff-Rohrleitungssysteme - Empfehlungen zum
Einbau von Druckrohrleitungssystemen für die Versorgung
mit Warm- und Kaltwasser für den menschlichen Gebrauch
innerhalb von Gebäuden

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Foreword

This document (CEN/TR 12108:2012) has been prepared by Technical Committee CEN/TC 155 "Plastics piping systems and ducting systems", the secretariat of which is held by NEN.

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 ENV 12108:2001.

This document includes the following:

- Annex A (informative), Thermal length variation as a function of the pipe length and temperature difference for pipe materials;
- a bibliography.

At the date of publication of this Technical Report, System Standards for piping systems of hot and cold water applications inside buildings are the following:

- EN ISO 15874 (all parts), *Plastics piping systems for hot and cold water installations — Polypropylene (PP)*;
- EN ISO 15875 (all parts), *Plastics piping systems for hot and cold water installations — Crosslinked polyethylene (PE-X)*;
- EN ISO 15876 (all parts), *Plastics piping systems for hot and cold water installations — Polybutylene (PB)*;
- EN ISO 15877 (all parts), *Plastics piping systems for hot and cold water installations — Chlorinated poly(vinyl chloride) (PVC-C)*;
- EN ISO 22391 (all parts), *Plastics piping systems for hot and cold water installations — Polyethylene of raised temperature resistance (PE-RT)*.

Introduction

This European Technical Report covers the material-related aspects of installation practice. General requirements including design consideration and pipe sizing are given in EN 806 series.

It is essential when dealing with techniques for the installation inside buildings of pressure piping systems to choose the correct type of products for the installation and that a well-established installation technique is used. The system supplier/manufacturer should supply detailed instructions for satisfactory handling, storage and installation.

1 Scope

This European Technical Report recommends practices to be followed in the application and installation of thermoplastics pipes and associated fittings. These fall within the scope of EN 806-1 and, EN ISO 15874, EN ISO 15875, EN ISO 15876, EN ISO 15877 and EN ISO 22391 to be used for hot and/or cold water distribution intended for human consumption inside buildings. This document can also be used for heating installations if applicable, except for under floor heating for which EN 12164 can apply.

Guidance is also given on acceptable methods of jointing polybutylene (PB), crosslinked polyethylene (PE-X), polypropylene (PP), chlorinated poly(vinyl chloride) (PVC-C) and Polyethylene of raised temperature resistance (PE-RT) pipes and associated fittings, together with recommendations for their storage, handling and transportation.

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.

EN 806-1, *Specifications for installations inside buildings conveying water for human consumption — Part 1: General*

3 Terms and definitions

For the purposes of this Technical Report, the terms and definitions given in EN 806-1 apply.

4 Storage, transport and handling

4.1 General

Pipe ends should be covered or protected in such a way that dirt is prevented from entering the pipe.

Pipe with end treatment, such as flanging, forming or pre-assembled fittings, should be stacked or supported so that the ends are free from loading and damage.

When storing, transporting and handling, original packing should be used if possible.

4.2 Storage

The storage chosen should not cause any change to pipe dimensions and the storage area should be such that it does not cause any damage to the pipe surface.

All fittings and accessories should be stored in their original containers, or as recommended by the system supplier/manufacture.

Storage in direct sunlight should be avoided, as extended exposure to UV light can lead to deterioration.

4.3 Handling

Loading and unloading of pipes should be carried out with care to avoid damage.

Where mechanical handling is employed, the techniques used should ensure that no damage to pipes can occur. Metal slings, hooks and chains should not come into contact with the pipe.

Pipes should not be dragged along rough ground or dropped on a hard surface.