



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 28799.2-2020

Replacing GB/T 28799.2-2012

**Heat-resistant polyethylene (PE-RT) piping system for hot and
cold water - Part 2: Pipes**

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Foreword

GB/T 28799 "Heat-resistant Polyethylene (PE-RT) Piping System for Hot and Cold Water" is divided into the following parts.

---Part 1.General Provisions;

---Part 2.Pipes;

---Part 3.Pipe fittings;

---Part 5.System applicability.

This part is Part 2 of GB/T 28799.

This section was drafted in accordance with the rules given in GB/T 1.1-2009.

This part replaces GB/T 28799.2-2012 "Heat-resistant polyethylene (PE-RT) piping system for cold and hot water-Part 2.Pipes", and

Compared with GB/T 28799.2-2012, the main technical changes are as follows.

---Modified the scope of application of the piping system (see Chapter 1, Chapter 1 of the.2012 edition);

--- Added a trade "note" (see Chapter 1);

---Relevant normative references have been revised (see Chapter 2, Chapter 2 of the.2012 edition);

--- Added "Terms, Definitions, Symbols and Abbreviations" (see Chapter 3);

---Modified the material regulations (see Chapter 4, Chapter 3 of the.2012 edition);

---Modified product classification (see Chapter 5, Chapter 4 of the.2012 edition);

---Modified the selection of tube series S (see Chapter 6, Chapter 4 of the.2012 edition);

---Modified the color regulations (see 7.1, 5.1 of the.2012 edition);

---Expanded the outer diameter size range of the pipe (see Table 3, Table 3 of the.2012 edition);

- Modified the wall thickness allowable deviation table (see Table 4,.2012 edition of Table 4);
 - Added the regulation of pipe length (see 7.3.3);
 - Increase the ash content, oxidation induction time of the pipe and the oxidation induction time and pigment content after the 95 degrees C/1000h hydrostatic test
- The requirements for dispersion and slow crack growth resistance have been modified to express the requirements for oxygen permeability (see Table 6,.2012 edition of Table 6);
- Adjust the system applicability into a separate chapter, and delete the specific content of the system applicability requirements (see Chapter 8,.2012 edition of 5.7);
 - Modified the test method (see Chapter 9, Chapter 6 of the.2012 edition);
 - Modified the group batch (see 10.2.1, 7.2.1 of the.2012 edition);
 - Modified the grouping (see 10.2.2, 7.2.2 of the.2012 edition);
 - Modified the requirements for type inspection (see 10.3, 7.3 of the.2012 edition);
 - Modified the item requirements of factory inspection (see 10.4.1, 7.4.1 of.2012 edition);
 - Modified the batch range of the sampling plan (see 10.4.2, 7.4.2 of the.2012 edition);
 - Modified the requirements for type inspection (see 10.5, 7.5 in the.2012 edition);
 - Modified the judgment rules (see 10.6,.2012 edition of 7.6);
 - Modified the content of the logo (see 11.1, 8.1 in the.2012 edition);
 - Amended the content of Appendix A, and changed "Calculation of allowable working pressure of pipes" to "Derivation of calculated value of maximum pipe series" (see Appendix A, Appendix A of the.2012 edition).

This part uses the redrafting method to refer to ISO 22391-2.2009 "Heat-resistant Polyethylene (PE-RT) for Plastic Piping Systems for Cold and Hot Water"

Part 2.Pipes", the degree of consistency with ISO 22391-2.2009 is not equivalent.

Please note that some contents of this document may involve patents. The issuing agency of this document is not responsible for identifying these patents.

This part was proposed by the China National Light Industry Council.

This part is under the jurisdiction of the National Plastic Products Standardization Technical Committee (SAC/TC48).

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1 Scope

This part of GB/T 28799 specifies the terms, definitions, symbols and abbreviations of heat-resistant polyethylene (PE-RT) pipes (hereinafter referred to as "pipes")

Abbreviations, materials, product classification, selection of tube series S, requirements, system applicability, test methods, inspection rules, signs, packaging, transportation and Store.

This part, together with other parts of GB/T 28799, is applicable to cold and hot water piping systems, including cold and hot water, drinking water for civil and industrial buildings.

Water and heating system, hot spring pipeline system and central heating secondary pipe network system, etc.

This section applies to PE-RTI and PE-RTII pipes.

The PE-RTI pipes in this section are not suitable for hot spring piping systems and central heating secondary pipe network systems.

Note. It is the responsibility of the purchaser to select this product appropriately according to its specific application requirements, combined with relevant regulations, standards or specifications.

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this document.

For undated references, the latest version (including all amendments) applies to this document.

GB/T 2828.1 Sampling inspection procedure by attributes Part 1. Batch inspection sampling plan retrieved by acceptance quality limit (AQL)

(GB/T 2828.1-2012, ISO 2859-1:1999, IDT)

GB/T 2918 Standard environment for condition adjustment and testing of plastic specimens (GB/T 2918-2018, ISO 291.2008, MOD)

GB/T 3682.1 Plastic thermoplastic melt mass flow rate (MFR) and melt volume flow rate (MVR) measurement

Part 1. Standard Method (GB/T 3682.1-2018, ISO 1133-1.2011, MOD)

GB/T 6111-2018 Determination of internal pressure resistance of thermoplastic piping systems for fluid transportation

GB/T 6671 Thermoplastic pipe longitudinal shrinkage determination (GB/T 6671-2001, eqvISO 2505.1994)

GB/T 8806 Plastic piping system plastic parts size determination (GB/T 8806-2008, ISO 3126.2005, IDT)

GB/T 9345.1 Determination of Ash in Plastics Part 1. General Method (GB/T 9345.1-2008, ISO 3451-1.1997, IDT)

GB/T 17219 Safety evaluation standard for drinking water distribution equipment and protective materials

GB/T 18251 Determination of pigment or carbon black dispersion in polyolefin pipes, pipe fittings and mixtures (GB/T 18251-2019,

ISO 18553.2002, MOD)

GB/T 18476 Polyolefin pipes for fluid transport-Determination of resistance to crack growth. Test method for slow crack growth (notch test

Test) (GB/T 18476-2019, ISO 13479.2009, MOD)

GB/T 19278-2018 General terms and definitions for thermoplastic pipes, fittings and valves

GB/T 19466.6 Plastic Differential Scanning Calorimetry (DSC) Part 6. Oxidation Induction Time (Isothermal OIT) and Oxidation Induction

Determination of temperature (dynamic OIT) (GB/T 19466.6-2009, ISO 11357-6.2008, MOD)

GB/T 21300 Determination of the opacity of plastic pipes and fittings (GB/T 21300-2007, ISO 7686.2005, IDT)