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

GB/T 45355-2025

**Polyethylene(PE) piping systems for non-pressure buried
drainage and sewerage**

无压埋地排污、排水用聚乙烯（PE）管道系统

(English Translation)

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document is modified to adopt ISO 8772:2006 "Polyethylene (PE) plastics piping systems for non-pressure buried drainage and sewage". Compared with ISO 8772:2006, this document has many structural adjustments. See Appendix A. This document has more technical differences than ISO 8772:2006.

The technical differences and their causes are listed in Appendix B. The following editorial changes were made to this document.

--- In order to coordinate with the existing standards, the name of the standard is changed to "Polyethylene (PE) Pipe System for Non-Pressure Buried Sewage and Drainage";

---The symbol of nominal outer diameter is changed to "dn", the symbol of effective length

of pipe is changed to "L", the symbol of joint length is changed to "LA", and the sealing area is changed to "L". The length is modified to "LC";

--- The symbol for the inner diameter of the socket in Figure 3 is modified to "ds";

--- To facilitate the understanding and use of the standard, the notes that do not conform to my country's national conditions have been deleted, and some notes have been changed or added;

--- To facilitate the understanding and use of the standard, the index number description of Figure 4 is added;

---Change "e3" in Figure 5 to "e2";

---Added and deleted some document lists in the references.

1 Scope

This document specifies the materials, product classification, appearance, color, and specifications of polyethylene (PE) pipes and fittings for non-pressure buried sewage and drainage systems.

It also describes the requirements for color, size, physical and mechanical properties, and system applicability, and describes the corresponding test methods, and stipulates the inspection rules, marking, packaging, transportation, etc. Transport and storage content.

This document applies to polyethylene (PE) pipe systems for non-pressure buried sewage and drainage.

Application conditions such as chemical resistance and heat resistance should also be met.

Note: The purchaser is responsible for appropriately selecting the products specified in this document based on specific application requirements and in combination with relevant laws, regulations, standards or specifications.

2 Normative references

The contents of the following documents constitute essential clauses of this document through normative references in this document.

For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This document.

GB/T 1033.1 Plastics - Determination of density of non-cellular plastics - Part 1: Immersion method, liquid pycnometer method and titration method (GB/T 1033.1-2008,ISO 1183-1:2004,IDT)

GB/T 1040.2 Determination of tensile properties of plastics Part 2: Test conditions for

moulding and extruded plastics (GB/T 1040.2-2022,ISO 527-2:2012,MOD)

GB/T 1845.2 Plastics Polyethylene (PE) Molding and Extrusion Materials Part 2: Preparation of Specimens and Determination of Properties (GB/T 1845.2-2021,ISO 17855-2:2016,MOD)

GB/T 2828.1 Sampling procedures for inspection by attributes Part 1: Sampling plans for batch inspection based on the acceptance quality limit (AQL) (GB/T 2828.1-2012,ISO 2859-1:1999,IDT)

GB/T 2918 Standard environment for conditioning and testing of plastic specimens (GB/T 2918-2018, ISO 291:2008, MOD)

GB/T 3682.1 Plastics Thermoplastics - Determination of melt mass flow rate (MFR) and melt volume flow rate (MVR) Part 1: Standard method (GB/T 3682.1-2018, ISO 1133-1:2011, MOD)

GB/T 6111 Determination of the resistance to internal pressure of thermoplastic pipe systems for fluid transportation (GB/T 6111-2018, ISO 1167-1:2006, ISO 1167-2:2006, ISO 1167-3:2007, ISO 1167-4:2007, NEQ)

GB/T 6671 Determination of longitudinal shrinkage of thermoplastic pipes (GB/T 6671-2001, ISO 2505:1994, EQV)

GB/T 8801 Drop test method for rigid polyvinyl chloride (PVC-U) pipe fittings

GB/T 8803 Injection molding rigid polyvinyl chloride (PVC-U), chlorinated polyvinyl chloride (PVC-C), acrylonitrile butadiene styrene Thermal oven test method for pipe fittings of ABS (ABS) and ASA (acrylonitrile-styrene-acrylate) terpolymers

GB/T 8804.1 Determination of tensile properties of thermoplastic pipes Part 1: General principles of test methods (GB/T 8804.1-2003,ISO 6259-1:1997,IDT)

GB/T 8804.3 Determination of tensile properties of thermoplastic pipes Part 3: Polyolefin pipes (GB/T 8804.3-2003, ISO 6259-3:1997, IDT)

GB/T 8806 Plastic piping systems - Determination of dimensions of plastic parts (GB/T 8806-2008, ISO 3126:2005, IDT)

GB/T 9341 Determination of flexural properties of plastics (GB/T 9341-2008, ISO 178:2001, IDT)

GB/T 9345.1 Determination of ash content in plastics Part 1: General method (GB/T 9345.1-2008, ISO 3451-1.