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

GB/T 19812.6-2022

**Plastic equipment for water saving irrigation - Part 6:
Polyethylene (PE) pipes for water supply**

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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 of Standardization Documents"

drafted.

This document is part 6 of GB/T 19812 "Plastic Water-Saving Irrigation Equipment". GB/T 19812 has released the following parts.

- Part 1. Single-wing labyrinth drip irrigation belt;
- Part 2. Pressure-compensated drippers and drip irrigation pipes;
- Part 3. Built-in drip irrigation pipes and drip irrigation tapes;
- Part 4. Polyethylene (PE) hose;
- Part 5. Buried drip irrigation pipes;
- Part 6. Polyethylene (PE) pipes for water delivery.

This document is revised and adopted ISO 8779.2020 "Specification for Polyethylene (PE) Pipes for Irrigation of Plastic Piping Systems".

Compared with ISO 8779.2020, this document has more structural adjustments.

Comparison list of structure number changes between two files

See Appendix A.

There are technical differences between this document and ISO 8779.2020. See Appendix B for a list of these technical differences and their reasons.

The following editorial changes have been made to this document.

- Modify the standard name to "Plastic Water-Saving Irrigation Equipment Part 6. Polyethylene (PE) Pipes for Water Transmission";
- Changed the example in Appendix C.

Please note that some content of this document may be patented. The issuing agency of this document assumes no responsibility for identifying patents.

Introduction

Plastic water-saving irrigation systems can effectively improve the utilization rate of water resources in irrigation, and are widely used in modern agricultural irrigation projects. to ensure that

Effective use and promotion of related products, promote and standardize the development of the industry, formulate system standards, and formulate them in parts according to different product functions.

Due to the complexity of the types of products involved in water-saving irrigation equipment, this series of standards has been gradually improved according to the market application.

During the determination process, the relevant plastic pipe product standards in the water-saving irrigation system have been formulated one after another, which currently consists of the following 6 parts.

--- Part 1. Single-wing labyrinth drip irrigation belt, the purpose is to standardize the technical requirements of single-wing labyrinth drip irrigation belt products;

--- Part 2. Pressure Compensated Drippers and Drip Irrigation Tubes, The purpose is to standardize the technology of pressure compensated drippers and drip irrigation tube products

Require;

--- Part 3. Inlaid drip irrigation pipes and drip irrigation belts, the purpose is to standardize the technical requirements for inlaid drip irrigation pipes and drip irrigation belt products;

--- Part 4. Polyethylene (PE) hose, the purpose is to standardize the technical requirements of polyethylene (PE) hose products;

--- Part 5. Buried drip irrigation pipe, the purpose is to standardize the technical requirements of buried drip irrigation pipe products;

--- Part 6. Polyethylene (PE) pipes for water delivery, the purpose is to standardize irrigation and water delivery pipes (including dry

pipe and branch pipe) product technical requirements.

The classification of pipe materials in this document is based on the series of pressure resistance, not according to GB/T 18475 (involving pipeline pressure connection

Continued use for 50 years) for grading, and the material naming is therefore different. In order to clarify the scope of use of this document, the corresponding provisions are given in the scope.

Plastic Water Saving Irrigation Equipment

Part 6. Polyethylene (PE) pipes for water transport

1 Scope

This document specifies the materials, requirements, test methods and inspections of polyethylene (PE) pipes for plastic water-saving irrigation and water delivery (hereinafter referred to as pipes).

Rules, marking, packaging, transportation and storage.

This document is applicable to the water temperature not greater than 45 degrees C, the maximum working pressure (MOP) not greater than 1.0MPa, and the use time under pressure generally not exceeding

1500h/year polyethylene pipe for irrigation and water delivery. For the pipes for irrigation and water delivery that are continuously subjected to internal pressure for a long time, GB/T 13663.2

Be applicable.

Note. The reference working temperature is 20°C, and the influence of water temperature on the maximum allowable working pressure of the pipe is shown in Appendix C.

2 Normative references

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, dated citations

documents, only the version corresponding to that date applies to this document; for undated references, the latest edition (including all amendments) applies to this document.

GB/T 1040.2 Determination of Tensile Properties of Plastics Part 2. Test Conditions for Molded and Extruded Plastics (GB/T 1040.2-2006, ISO 527-2.1993, IDT)

GB/T 2828.1 Counting Sampling Inspection Procedure Part 1. Lot-by-Lot 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 Conditioning and Testing of Plastic Specimens (GB/T 2918-2018, ISO 291.2008, MOD)

GB/T 3682.1 Determination of Melt Mass Flow Rate (MFR) and Melt Volume Flow Rate (MVR) of Plastic Thermoplastics

Part 1. Standard Methods (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 (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, eqv ISO 2505.1994)

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

GB/T 8806 Determination of the dimensions of plastic parts of plastic piping systems (GB/T 8806-2008, ISO 3126.2005, IDT)

GB/T 9345.1 Determination of ash content of plastics - Part 1. General method (GB/T 9345.1-2008, ISO 3451-1.1997, IDT)

GB/T 13021 Determination of carbon black content in polyethylene pipes and fittings (thermogravimetric method) (GB/T 13021-1991, neq ISO 6964. 1986)

GB/T 18251 Determination of Pigment or Carbon Black Dispersion in Polyolefin Pipes, Fittings and Compounds (GB/T 18251-2019, ISO 18553.2002, MOD)

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

GB/T 19466.6 Differential Scanning Calorimetry (DSC) of Plastics 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)