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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

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GB 28379-2022

Replacing GB 28379-2012

Minimum Allowable Values of Water Efficiency and Water Efficiency Grades for Flush Valves of Plumbing Fixtures

便器冲洗阀水效限定值及水效等级

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Foreword

This document was drafted in accordance with the rules of GB/T 1.1-2020 Directives for Standardization - Part 1: Rules for the Structure and Drafting of Standardizing Documents.

This document serves as a replacement of GB 28379-2012 *Minimum Allowable Values of Water Efficiency and Water Efficiency Grades for Flush Valve for Water Closets*. In comparison with GB 28379-2012, apart from structural adjustments and editorial modifications, the main technical changes are as follows:

- a) The scope of application is modified from "mechanical flush valves for water closets, pressure-type flush valves for water closets and non-contact flush valves for water closets" into "flush valves for plumbing fixtures" (see Chapter 1; Chapter 1 of Version 2012);
- b) The term and definition of consumption of flushing water is added (see 3.2);
- c) The indicators of water efficiency grades are modified (see Chapter 4; 4.3 and 4.4 of Version 2012);
- d) Test and calculation are modified (see Chapter 6; Chapter 5 of Version 2012);
- e) The plumbing fixtures for the tests are added (see Appendix A).

Please be noted that certain content of this document may involve patents. The institution issuing this document does not undertake the responsibility of identifying these patents.

This document was proposed by and shall be under the jurisdiction of Standardization Administration of the People's Republic of China.

This document was firstly issued in 2012. This is the first revision.

Minimum Allowable Values of Water Efficiency and Water Efficiency Grades for Flush Valves of Plumbing Fixtures

1 Scope

This document specifies the minimum allowable values of water efficiency and water efficiency grades, technical requirements and test methods for flush valves of squatting pans and urinals.

This document is applicable to flush valves of squatting pans and urinals installed on cold water supply pipelines in building facilities and used under the condition that the static pressure of the water supply is not greater than 0.6 MPa.

2 Normative References

The contents of the following documents constitute indispensable clauses of this document through the normative references in the text. In terms of references with a specified date, only versions with a specified date are applicable to this document. In terms of references without a specified date, the latest version (including all the modifications) is applicable to this document.

GB/T 9195 Classification and Terms of Building and Sanitary Ceramics

GB 28377 Minimum Allowable Values of Water Efficiency and Water Efficiency Grades for Urinals

GB 30717 Minimum Allowable Values of Water Efficiency and Water Efficiency Grades for Squatting Pans

GB/T 33733 Terminology and Classification for the Kitchen and Sanitary Ware Fittings

3 Terms and Definitions

The terms and definitions defined in GB/T 9195, GB 28377, GB 30717 and GB/T 33733, and the following terms and definitions are applicable to this document.

3.1 flush valves of plumbing fixtures

Flush valves of plumbing fixtures are the control device for implementing the flushing function of the plumbing fixtures and a form of flush valve.

3.2 consumption of flushing water

Consumption of flushing water refers to the total flow of water from the moment that the flush

the corresponding requirements for the flushing function of plumbing fixtures.

5.3 Minimum Allowable Values of Water Efficiency for Flush Valves of Plumbing Fixtures

The minimum water efficiency required by the minimum allowable values of water efficiency for flush valves of plumbing fixtures is Grade-3 water efficiency in Table 1.

6 Test Methods

6.1 Test

- **6.1.1** The test of the average consumption of flushing water of flush valves of squatting pans shall be carried out in accordance with the requirements of GB 30717.
- **6.1.2** The test of the average consumption of flushing water of flush valves of urinals shall be carried out in accordance with the requirements of GB 28377.
- **6.1.3** The flush valves without matching plumbing fixtures shall be installed on the test plumbing fixtures specified in Appendix A for testing.

6.2 Calculation

- **6.2.1** The average consumption of flushing water of single-flush valves is the arithmetic mean of its measured flushing water consumption.
- **6.2.2** The average consumption of flushing water of double-flush valves shall be calculated in accordance with Formula (1):

$$V = \frac{V_1 + 2V_2}{3} \qquad \cdots \qquad (1)$$

Where,

V---the average flushing water consumption of double-flush valves, expressed in (L);

 V_1 ---the arithmetic mean of full-flush flushing water consumption of double-flush valves, expressed in (L);

 V_2 ---the arithmetic mean of half-flush flushing water consumption of double-flush valves, expressed in (L).

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