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

GB/T 21873-2025

Replacing GB/T 21873-2008

**Rubber seals - Joint rings for water supply, drainage and
sewerage pipelines - Specification for materials**

橡胶密封件 给、排水管及污水管道用接口密封圈 材料规范

(English Translation)

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Reference

Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting.

This document replaces GB/T 21873-2008 "Rubber Seals - Material Specifications for Interface Sealing Rings for Water Supply, Drainage Pipes and Sewage Pipes".

Compared with GB/T 21873-2008, the main technical changes in the "Standard" are as follows, apart from structural adjustments and editorial modifications.

- a) Supplementary information on hardness grades has been added (see Table 1);
- b) Added seal application types WA, WC, and WG (see Chapter 4);
- c) The specific requirements for "microbial resistance" have been changed (see 5.3, 2008 version 4.1.3);
- d) Added "Optional Performance Requirements" and "Life Calculation (LT Type)" to the "Optional Requirements" section (see 6.1, 6.4);
- e) Added information about "testing the life of the seal" to the seal marking label [see Chapter 11h].

This document is modified to adopt ISO 4633:2023 "Rubber seals - Specification for interface sealing rings for water supply, drainage and sewage pipes".

Compared with ISO 4633:2023, this document has undergone many structural adjustments. A comparison table of the structural numbering changes between the two documents can be found here.

Appendix A.

The technical differences between this document and ISO 4633:2023, and the reasons therefor, are as follows.

---The normative reference HG/T 4301-2012 has been added, specifying the requirements for "microbial resistance," namely, "test methods and..." the requirement that "the material should comply with the relevant national standards" should be changed to "the anti-mildew performance of the material should comply with Table 2, 9.3 of HG/T 4301-2012".

The requirements for mildew resistance level not exceeding Grade 1 and the requirements of other relevant national standards (see 5.3) should be met to adapt to my country's technical conditions;

---ISO 3302-1 (see 5.4) has been replaced with the normatively referenced GB/T 3672.1 to adapt to my country's technical conditions;

---ISO 7743 has been replaced with normative reference GB/T 7757, and the references have been changed to normative references (see 5.5) to suit [the requirements].

Based on my country's technological conditions;

---ISO 9691:1992 (see 5.5) has been replaced with the normatively referenced GB/T 17604-1998 to adapt to my country's technical conditions;

---ISO 48-2 (see 5.6) has been replaced with the normatively referenced GB/T 6031 to adapt to my country's technical conditions;

---ISO 37 (see 5.7) has been replaced with the normatively referenced GB/T 528 to adapt to my country's technical conditions;

---ISO 2285:2019 has been replaced with GB/T 42279-2022, which is a normative reference, and the reference has been changed to a normative reference.

(See 5.8.2) to adapt to my country's technological conditions;

---ISO 815-1:2019 (see 5.8.2, 6.4.3) has been replaced with the normatively referenced GB/T 7759.1-2015 to adapt to my country's national standards.

Technical conditions;

---ISO 815-2 has been replaced with the normatively referenced GB/T 7759.2 (see 5.8.3 and Table 4) to adapt to my country's technical conditions;

---ISO 188:2023 (see 5.9) has been replaced with the normatively referenced GB/T 3512-2014 to adapt to my country's technical conditions;

---ISO 6914:2021 has been replaced with GB/T 9871-2008, which is a normative reference, and the reference references have been changed to normative references.

(See 5.10) to adapt to my country's technological conditions;

---ISO 3384-1:2019 (see 5.10, 6.4.2) has been replaced with the normatively referenced GB/T 1685-2008 to adapt to my country's technical standards.

Technical conditions;

---ISO 1431-1 (see 5.12) has been replaced with the normatively referenced GB/T 7762 to adapt to my country's technical conditions;

---A footnote has been added to the table, stating that "the hardness change value under the condition of -25°C and 168h can be replaced by ShoreA after consultation with the customer." (See Table 4) to adapt to my country's technological conditions;

---ISO 3387 has been replaced with the normatively referenced GB/T 12832 (see 6.2 and Table 4) to adapt to my country's technical conditions;

---ISO 1817 has been replaced with the normatively referenced GB/T 1690 (see 6.3 and Table 4) to adapt to my country's technical conditions;

---ISO 11346 has been replaced with the normatively referenced GB/T 20028 (see 6.4 and Table 4) to adapt to my country's technical conditions;

---ISO 23529 (see 7.1) has been replaced with the normatively referenced GB/T 2941 to adapt to my country's technical conditions.

The following editorial changes have been made to this document.

---Ozone concentration has been changed from "pphm" to "10⁻⁸", and the note has been deleted (see 5.12);

---The test rate for the strength of the sealing ring or the joint of the sample is changed from "(8.3±0.8)mm/s" to "(500±50)mm/min" (see B.3).

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

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