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

GB/T 23447-2023

Sanitary ware - Shower for bathing

卫生洁具 淋浴用花洒

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Foreword

This document was issued on 6 August 2023 by the State Administration for Market Regulation; Standardization Administration of the PRC and takes effect on 1 March 2024.

It is a GB/T standard: recommended rather than compulsory, but it is the text a Chinese reviewer applies when assessing a submission.

1 Scope

GB/T 23447-2023 covers showers for bathing - the materials, which may not pollute the water and may not be of a kind that corrodes easily, the technical requirements beginning with the appearance quality of the castings and their inner cavities, the test methods, the inspection rules that separate exit-factory inspection from type inspection, and the marking, packaging, transport and storage. Three normative appendices carry the measurements that decide how a shower behaves in use: the temperature drop, the average jet angle, and the jet force. Those three matter because the shower head is the point where a heated, pressurised supply reaches the user directly. Water that leaves the spray colder than it arrived makes the mixer setting misleading; a spray that opens too wide loses heat and water without wetting the bather, while one that concentrates too hard is uncomfortable to stand under. Appearance faults such as shrinkage cavities, blisters, cracks and pores are judged visually at 600 mm +/- 50 mm under lighting of 300 lx +/- 20 lx, so the same defect is called the same way in every factory. Written for sanitary ware manufacturers, test

laboratories, and market inspection authorities.

This document specifies the materials, technical requirements, test methods, inspection rules, marking, packaging, transportation, storage of shower for bathing (hereinafter referred to as shower).

This document is applicable to showers, which have dynamic pressures of 0.05 MPa ~ 0.50 MPa and water temperatures of 4 °C ~ 70 °C.

2 Normative references

The provisions in following documents become the provisions of this Standard through reference in this Standard. For the dated references, the subsequent amendments (excluding corrections) or revisions do not apply to this Standard; however, parties who reach an agreement based on this Standard are encouraged to study if the latest versions of these documents are applicable. For undated references, the latest edition of the referenced document applies.

GB/T 2828.1 Sampling procedures for inspection by attributes - Part 1. Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection

GB/T 6461 Methods for corrosion testing of metallic and other inorganic coatings on metallic substrates - Rating of test specimens and manufactured articles subjected to corrosion tests

GB/T 7307 Pipe threads with 55 degree thread angle where pressure-tight joints are not made on the threads

GB/T 9286 Paints and varnishes - Cross-cut test

GB/T 10125 Corrosion tests in artificial atmospheres - Salt spray tests

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 Shower

A device used for showering that allows water to flow out in the form of small droplets or jets.

Note. Showers can generally be divided into two types. hand-held showers and head

showers.

3.2 Hand-held shower

A shower, that is installed on a fixed or movable bracket and connected by a hose, meanwhile can be freely moved or controlled by the showerer within a certain space.

3.3 Head shower

A shower, that is fixed on the top or side of the user and sprays the user directly from above or from the side.

4 Materials

The materials used in the product shall not pollute the water quality; the use of easily corroded materials is not allowed.

5 Technical requirements

5.1 Appearance quality

5.1.1 The outer surface of copper castings shall not have defects such as shrinkage cavities, blisters, cracks, pores; the inner cavity shall not have molding sand adhering to it.

5.1.2 The outer surface of plastic parts shall not have obvious defects, such as ripples, scratches, modification damage, etc.

5.1.3 All surfaces, that are accessible to the human body during use, shall not have sharp edges and corners, that may cause harm to the human body.

5.1.4 After installation, there shall be no un-plated areas on the electroplated surface.

The surface shall be bright and even; no peeling, peeling, blistering or other phenomena are allowed.

5.2 Pipe thread accuracy

The pipe thread accuracy of the external connection of the shower shall comply with the B-level accuracy requirements in GB/T 7307. Special threads as per contract requirements.

5.3 Safety performance

5.3.1 Conduct the test in accordance with 6.3.1. Each component of the shower shall be flexible; the shower shall have no obvious deformation; its water jet pattern shall not

change.

5.3.2 Conduct the test in accordance with 6.3.2. Each component of the shower shall be flexible; the shower head shall have no obvious deformation; its water jet pattern shall not change.

5.4 Surface coating and plating quality

5.5 Sealing performance

Carry out the test in accordance with the provisions of 6.5. There shall be no leakage at the connection parts of each component.

5.6 Mechanical strength

Carry out test in accordance with 6.6. There shall be no cracks, visible permanent deformation or other damage. After test, it shall meet the requirements of 5.5.

5.9 Tensile properties

Carry out the test in accordance with the provisions of 6.9. There shall be no obvious damage or any leakage on the shower and its connecting parts.

5.10 Resistance to installation loads

The installation load resistance of the threads of the shower's connection pipe shall be tested in accordance with the provisions of 6.10 and Table 2. After the test, the threads shall have no cracks or damage AND meet the requirements of 5.5.

5.11 Temperature drop

The test is carried out in accordance with the provisions of 6.11. The temperature drop shall not be greater than 3 °C.

5.14 Anti-siphon performance of handheld showers

In the shower system, when the connecting parts other than the handheld shower, such as hoses and faucets, do not have anti-siphon devices, the handheld shower shall have an anti-siphon function. The anti-siphon performance is tested, in accordance with the provisions of 6.14; there is no visible water level in the transparent tube.

5.15 Ball joint swing performance

For movable head showers or shower heads with ball connections, this test shall be carried out. After 10000 cycles in accordance with the provisions of 6.15, there shall be