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

GB 18145-2014

Replacing GB 18145-2003

Ceramic cartridge faucets

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1 Scope

China's product standard for ceramic cartridge faucets - the taps fitted at the end of hot and cold water lines in buildings, in which two ceramic discs sliding against each other open, close and mix the flow. It sets the terms and definitions, the classification and naming, the materials, the supporting devices, the requirements, the test methods, the inspection rules and the provisions for marking, packaging, transport and storage, and it applies to every

kind of such faucet working at a static pressure of not more than 1.0 MPa with the water between 4 °C and 90 °C. Faucets are classified as single-handle or double-handle by the number of controls used to open and close them, and as single-pipe or double-pipe by the number of supply lines controlled; the product name must state the body material, the number of controls, the number of inlet pipes and the application. The material clause is the one that matters for anyone importing into China: nothing in contact with drinking water may harm health or change the water's quality, appearance, taste or smell under the conditions of use, and no part in contact with water may be made of zinc alloy or of any other corrodible material. Shower fittings supplied with shower and bath-shower faucets must comply with GB/T 23447 and the supply hoses with GB/T 23448. The requirements then cover appearance and coating, the mechanical and sealing performance, the flow and the endurance of the cartridge, with eight annexes of test procedures. Issued on 6 May 2014 and in force since 1 December 2014, it replaces GB 18145-2003.

This Standard specifies the terms and definitions, classification and name, materials, supporting devices, requirements, test methods, inspection rules, marks, package, transport and storage of ceramic cartridge faucets (hereinafter referred to as Faucets). This Standard is applicable to all kinds of faucets that are mounted on hot and cold water pipeline ends in the building, of which the working pressure (static) is not greater than 1.0 MPa and the medium temperature is between 4°C~90°C.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB/T 2828.1-2012 Sampling procedures for inspection by attributes - Part1. Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection (ISO 2859-1.1999, IDT)

GB/T 5270-2005 Metallic coatings on metallic substrates - Electrodeposited and chemically deposited coatings - Review of methods available for testing adhesion (ISO 2819.1980, IDT)

GB/T 5750.6 Standard examination methods for drinking water - Metal parameters

GB/T 6461-2002 Methods for corrosion testing of metallic and other inorganic coatings on metallic substrates - Rating of test specimens and manufactured articles subjected to corrosion tests (ISO 10289.1999.IDT)

GB/T 7306.1 Pipe threads with 55 degree thread angle where pressure-tight joints are made on the threads - Part

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 Ceramic cartridge faucets A terminal device that takes ceramic as sealing element, uses relative movement of ceramic to realize water passing, water shutoff, adjustment of outlet flow rate and / or temperature.

3.2 Single handle It controls water flow by a handle or hand wheel; it may have water temperature.

3.3 Double handles It controls water flow and water temperature by two handles or hand wheels.

3.4 Single pipeline Faucet controls a pipeline of (cold or hot) water supply.

3.5 Double pipelines Faucet controls two pipelines of (cold or hot) water supply.

3.6 Flow regulator The device that is mounted at water outlet of faucet to change faucet flow.

4.1 Classification

4.1.1 Classify into single handle and double handles by amount of control part of turning on and turning off.

4.2 Naming Product's name shall contain faucet body material, the amount of control part of turning on and turning off, the amount of inlet pipeline controlled by faucet and application.

5 Material

5.1 All materials used by the product in contact with drinking water, shall not cause harm to human health or any change in water quality, appearance, taste, and smell to drinking water, under conditions of use specified in this document.

5.2 The part of product in contact with water shall not use zinc alloy or other corrosive materials.

6 Supporting devices

6.1 The shower that supports shower faucets and bath / shower faucets shall comply with the provisions in GB/T 23447.

6.2 The supporting hose of faucets shall comply with the provisions in GB/T 23448.

7.1 Appearance

7.1.1 The gloss of coating surface shall be even; there shall be no peeling, cracking, burning, turning on at the end, peeling, dark spots and obvious pitting, burrs or other defects.

7.2 Screw thread

7.2.1 The surface of screw thread shall be smooth; there shall be no obvious defects such as dents and broken teeth.

7.3 Assembly

7.3.1 The actions of assembled handle or hand wheel shall be light, smooth and without jamming. The switch shall be lifted smooth, light and without jamming. The lifting part of switch and lifting lever shall be firmly connected. Rotating outlet pipe of faucet shall rotate lightly and without jamming.

7.3.2 Hot and cold water mixing faucets shall have cold and hot marks. Marks and faucet body are firmly connected. Cold water shall be represented by blue or letter "C" or "Cold" while hot water by red or letter "H" or "Hot". When control devices of double-pipeline faucets are horizontally lined, cold water mark is on the right and hot water mark on the left.

7.3.3 Single handle and single pipeline faucet handle or hand wheel rotates counterclockwise to turn on while rotating clockwise to turn off.

7.4 Precipitation of metal contaminants (applicable to washbasin and kitchen faucets)

7.6.6.1 Coating adhesion strength Conduct cross cut test according to

8.6.6.1 and it shall meet requirements of Grade 1.

8 Test methods

8.1 Appearance Visually inspect the faucet appearance. Visual inspection shall be conducted under natural scattering light or white light without reflection light. And the illumination shall not be less than 300 lx.

8.5 Size Use gauge of corresponding precision to detect faucet size.

8.6.2.3 Sealing performance test of manual switch

8.6.3 Hydraulic performance test The devices for hydraulic performance test are shown in Appendix C.

8.6.6 Adhesion strength test of coating and plating

8.6.6.1 Adhesion strength test of coating Conduct cross-cut test and rating on the relatively flat surface of faucet, according to methods specified in GB/T 9286-1998.