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

GB/T 34254-2025

Replacing GB/T 34254-2017

**Test method for handle strength and decoration resistance to
chemical corrosion of domestic ceramic wares**

日用陶瓷把手、装饰材料牢固度测试方法

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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 34254-2017 "Test Method for Firmness of Daily-Use Ceramic Handles and Decorative Materials", and is consistent with GB/T 34254- Compared to 2017, aside from structural adjustments and editorial changes, the main technical changes are as follows.

- The scope has been changed (see Chapter 1, Chapter 1 of the 2017 edition);
- Two new chapters have been added. "Normative References" and "Terms and Definitions" (see Chapters 2 and 3);
- The principle behind the handle's sturdiness has been changed (see 4.1, 2.1 in the 2017

version);

- A diagram illustrating the handle sturdiness test has been added (see 4.2);
- The instruments and materials used for handle strength testing have been changed (see 4.2, 2.2 in the 2017 edition);
- The steps for ensuring handle sturdiness have been modified (see 4.5, 2.4 in the 2017 version);
- The principle governing the durability of decorative materials has been changed (see 5.1, 3.1 in the 2017 edition);
- The equipment and materials used to improve the durability of decorative materials have been modified (see 5.2, 3.2 in the 2017 edition);
- The test requirements for handle strength have been changed (see 5.3, 3.3 in the 2017 version);
- The procedure for ensuring the durability of decorative materials has been modified (see 5.4, 3.4 in the 2017 edition);
- The classification of durability grades for decorative materials has been changed (see 5.5, 3.5 in the 2017 edition);
- The test report has been revised (see Chapter 6, 2017 edition, 2.6, 3.6).

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

This document was proposed by the China National Light Industry Council.

This document is under the jurisdiction of the National Technical Committee on Standardization of Daily-Use Ceramics (SAC/TC405).

This document was drafted by: Jingdezhen Ceramic University, China Light Industry Ceramic Research Institute, and Jiangxi Provincial Ceramic Testing Center.

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The release history of this document and the document it replaces is as follows.

- First published in 2017 as GB/T 34254-2017;
- This is the first revision.

Daily-use ceramic handles, decorative materials Firmness test method

1 Scope

This document describes the test methods for the durability of handles on everyday ceramic

ware and the durability of decorative materials for everyday ceramic ware.

This document applies to the testing of handle firmness in everyday ceramic products with handles.

This document applies to the testing of the durability of decorative materials on glazed ceramic products for daily use.

2 Normative references

GB/T 5000

3 Terms and Definitions

The terms and definitions defined in GB/T 5000 apply to this document.

4.1 Principle

By applying appropriate force or load to the handle of daily-use ceramics, observe whether cracks or damage appear on the ceramic products to determine their condition. Handle sturdiness.

4.2 Schematic diagram of handle firmness test

Figure 1 shows a schematic diagram of the handle firmness test.

a) Schematic diagram of tension b) Schematic diagram of compression c) Schematic diagram of kinematic loading method Index number explanation. 1---Tension; 2---Pressure; 3---filler; 4---Clamping fixture.

Figure 1. Schematic diagram of handle firmness test

4.3 Instruments and Materials

4.3.1 Tension/compression sensor. A tension/compression sensor with a range of 0N~500N and an accuracy of 0.05% of full scale (FS).

4.3.2 Staining solutions (such as ink, methylene blue solution, etc.) and brushes.

4.3.3 Filler. with a bulk density of (1.5 ± 0.2) g/cm³ (such as space sand).

4.3.4 Glass graduated cylinders. graduation values are 1 mL, 5 mL and 10 mL respectively.

4.4 Samples

For each testing method, at least three samples of the same type should be taken, and the samples should be free of cracks, damage, or defects.

4.5.1 Pre-test inspection

Apply a suitable staining solution (4.3.2) to the sample surface, and after it dries slightly, wipe off the staining solution. Then, irradiate the sample from a distance of 25cm to 35cm.

Visually inspected at approximately 300 lx, samples without cracks or defects were selected as test specimens.

4.5.2 Static Loading Method

4.5.2.1 Apply the appropriate force to the sample handle according to the volume of the sample, as shown in Table 1.

Table 1. Stress values for volumetric forces

Volume/mL	< 100	100~300	301~600	601~1000	1001~2000	>2000
Force value/N	40	70	100	120	150	180

4.5.2.2 Fix the specimen on the test bench and apply a corresponding tensile force at the center of the main body. When the tensile sensor reading reaches the specified value... Keep it for 10 minutes.

4.5.2.3 After the test, remove the samples, observe the damage, and record the test results. At least three identical samples should be taken for each type of product. Batch sample testing.

4.5.2.4 Fix the sample on the test bench and apply appropriate pressure at the center of the main body. When the pressure sensor reading reaches the specified value... Keep it for 10 minutes.

4.5.2.5 After the test, remove the samples, observe the damage, and record the test results. At least three identical samples should be taken for each type of product. Batch sample testing.

4.5.3 Motion Loading Method

4.5.3.1 Seal the sample after filling it with the filler (4.2.4).

4.5.3.2 Fix the specimen on the test bench and make the specimen reciprocate up and down and left and right with an acceleration of 5 m/s² and a distance of 300 mm. 50 times.

4.5.3.3 After the test, remove the samples, observe the damage, and record the test results. At least three identical samples should be taken for each type of product. Batch sample testing.

4.6 Results Representation

4.6.1 Static loading method. Record the corresponding force and damage condition of each specimen.

4.6.2 Motion loading method. Record the corresponding load weight of each specimen and