



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

GB/T 10357.4-2023

**Test of mechanical properties of furniture - Part 4: Stability of
storage units**

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Foreword

This document was drafted in accordance with the rules provided in GB/T 1.1-2020 Directives

for Standardization - Part 1.Rules for the Structure and Drafting of Standardizing Documents.

This is Part 4 of GB/T 10357 Test of Mechanical Properties of Furniture. GB/T 10357 has issued the following parts.

---Part 1.Strength and Durability of Tables;

---Part 2.Stability of Chairs and Stools;

---Part 3.Strength and Durability of Chairs and Stools;

---Part 4.Stability of Storage Units;

---Part 5.Strength and Durability of Storage Units;

---Part 6.Strength and Durability of Beds;

---Part 7.Stability of Tables.

---Part 8.Stability of Chairs with Tilting or Reclining Mechanisms When Fully Reclined, and Rocking Chairs.

This document serves as a replacement of GB/T 10357.4-2013 Test of Mechanical Properties

of Furniture - Part 4.Stability of Storage Units. In comparison with GB/T 10357.4-2013, apart

from structural adjustments and editorial modifications, the main technical changes are as follows.

- The Normative References is added (see Chapter 2);
- The Terms and Definitions is added (see Chapter 3);
- The test conditions are modified. pre-treatment conditions, loading force requirements, control requirements for unit movement during the test and loading requirements are added; the tolerance requirements are modified (see Chapter 4; 2.1 of Version 2013);
- The overall requirements for test equipment and facilities are added (see 5.1);
- The ground requirements are modified (see 5.2; 3.3 of Version 2013);
- The requirements for wall surface, quality, suspended filing pocket load, loading pad and TV formwork are added (see 5.3; 5.5, 5.6, 5.7 and 5.8);
- The requirements for stops are modified (see 5.4; 3.2 of Version 2013);
- The general principles of tests are deleted (see 4.1 of Version 2013);
- The determination of the center of gravity is deleted (see 4.2 of Version 2013);
- The shelf stability test is deleted (see 4.3 of Version 2013);
- The general rules of tests are added (see 6.1);
- The item name of the no-load stability test when the movable components are closed is modified into "all door-opening and extension elements, and flaps are closed, with all storage components unloaded", and is divided into two parts. units with a height of or adjustable to $\leq$ 1,000 mm, and units with a height of or adjustable to $>$ 1,000 mm; the force value of the test with a height of or adjustable to $>$ 1,000 mm is modified (see 6.2;

4.4.1 of Version 2013);

- All door-opening, extension elements and flap opening test, with all storage components unloaded, is added (see 6.3);
- The item name of the no-load stability test when the movable components are opened is modified into "all door-opening and extension elements, and flaps are opened and

unloaded, all storage components are unloaded", and the test method is modified (see 6.4.1; 4.4.2 of Version 2013);

---Door-opening, extension elements and flap opening and loading test, with all storage components unloaded, is added (see 6.4.2);

---The test name is modified from the loading stability when the movable components are opened into door-opening, extension elements and flap opening and loading, with all storage components loaded, and the test method is modified (see 6.4.3; 4.5.2 of Version 2013);

---The topmost extension elements opening and loading test, with some storage components loaded, is added (see 6.4.4);

---The test name is modified from the loading stability when the movable components are closed into all closed door-opening, extension elements and flap opening direction loading, with all storage components loaded, and the test method is modified (see 6.5;

4.5.1 of Version 2013);

---Dynamic stability test of units with casters is added (see 6.6);

---Strength test of the anti-overturn device is added (see 6.7);

---Additional stability test for TV-furniture is added (see 6.8);

---The Test Report is added (see Chapter 7);

---The load and force values for the stability test of storage units are added (see Appendix B).

This document modifies and adopts ISO 7171.2019 Furniture - Storage Units - Test Methods

for the Determination of Stability.

In comparison with ISO 7171.2019, this document makes the following structural adjustments.

---The content of 6.1 in ISO 7171.2019 is integrated into 4.1 of this document;

---The content of Appendix A in ISO 7171.2019 is divided into Appendix A and Appendix B of this document;

---Appendix C corresponds to Appendix B of ISO 7171.2019.

The technical differences between this document and ISO 7171.2019, and the causes for these

differences are as follows.

---The expression of the Scope is modified to comply with the compilation regulations of Chinese Standards (see Chapter 1; Chapter 1 of ISO 7171.2019);

---The terms and definitions of overturn, TV-furniture and bracket are added for the newly added related test items (see 3.1; 3.3 and 3.4);

---The terms and definitions of extension element, flap, free standing unit, interlock, leveling device, unit, clear height, locking mechanism, worst case, suspended filing pockets, wall attachment device and component are deleted, because they have been included in GB/T 10357.5 (see Chapter 2 of ISO 7171.2019);

---The pre-treatment requirements are modified, and the provisions for connecting walls and failing to satisfy test conditions are added. The test items of the product are clarified, and deviation assessment is proposed, which is more operable (see 4.1; 4.1 of ISO 7171.2019);

---The requirements for dimensional tolerances are modified. dimensions smaller than 200 mm are distinguished from the requirements for other dimensional tolerances, and the requirements for dimensional tolerances of the spherical curvature of a radius of 300 mm on the loading pad are added. Different tolerance requirements are proposed for different dimensions, which is more scientific (see 4.3; 4.3 of ISO 7171.2019);

---The loading provisions for storage components / volumes of heavy equipment (such as. refrigerators and washing machines) are added. More storage situations for storage units are covered, which is more complete (see Table 1 of 4.5);

---The requirements for test facilities, such as. wall surfaces, spherical objects and TV formworks, etc. are added, which are required for the newly added test items (see 5.3,

5.7 and 5.9);

---Partial loading test of storage components is added, and the content of this part is added to Appendix C, so as to ensure the stability of this type of products (see 6.4.4);