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

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**Test of mechanical properties of furniture - Part 1: Strength and
durability of tables**

家具力学性能试验 第1部分：桌类强度和耐久性

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1 Scope

GB/T 10357.1-2024 is the Chinese national standard on test of mechanical properties of furniture - part 1: strength and durability of tables, in the field of domestic and commercial equipment, entertainment, sport. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 26 October 2024 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 May 2025.

Classification: ICS 97.140, CCS Y80. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This document describes the test methods for the strength and durability of table furniture. This document applies to the inspection, testing, and evaluation of the mechanical properties of table furniture. This document does not apply to baby changing tables.

2 Normative references

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

GB/T 10357.5-2023, Test of mechanical properties of furniture - Part

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1 duty cycle The duration for which the drive system of height-adjustable table can be adjusted without compromising its lifespan. [Source: GB/T 38607-2020, 3.2, modified]

3.2 end extension An additional end that exceeds the original table length by ≥ 200 mm and not directly supported by the ground.

3.3 levelling device A device, with a vertical adjustment range of < 40 mm, and with a function to keep the tabletop level.

3.4 type I tables Tables with a surface area greater than

0.5 m² and a height greater than 600 mm.

3.5 type II tables All tables except for type I tables.

4 General test conditions

4.1 Pretreatment and test environment The test piece shall be a fully assembled finished product. Demountable furniture shall be assembled completely according to the drawings; modular furniture, if with several assembly methods, shall be assembled in the way that is least conducive to strength and durability testing. If the manufacturer does not provide installation or assembly instructions for the furniture, the assembly method shall be recorded in the test report. All hardware connectors shall be firmly installed before the test. Fastening shall not be done during the test unless otherwise specified by the manufacturer. During the test, the tabletop shall be adjusted to be level, and the levelling device shall be adjusted to the middle position, but not more than 13 mm (from the fully closed position). Unless otherwise specified by the manufacturer, the test piece shall be placed in an indoor environment without load for at least 24 hours before testing. The test shall be conducted in an indoor environment. If the temperature exceeds the range of 15 °C ~ 27 °C during the test, the highest and lowest temperatures shall be recorded in the test report. For the tabletop deflection test (see 6.7), except for tables made of metal, glass, or stone, other tables shall be tested in an environment with a relative humidity of 40% ~ 70%. If the humidity exceeds the range of 40% ~ 70% during the test, the highest and lowest humidity levels shall be recorded in the test report. Before the test, the entire test piece shall be visually inspected completely, and any existing defects shall be recorded to distinguish them from defects caused by the test.

4.2 Loading force The force in a static load shall be applied slowly enough to avoid generating a dynamic load. Unless otherwise specified, each force shall be held for 10 ~ 15 seconds. During the durability test, the force shall be applied at a certain frequency to avoid generating excessive heat. Unless otherwise specified, each force shall be held for (2 ± 1) s. Force can be replaced by a heavy object. The substitution relationship is 10 N = 1 kg.

4.3 Tolerance Unless otherwise specified, the following tolerances apply to this document. -- Force. $\pm 5\%$ of the nominal force; -- Mass. $\pm 1\%$ of the nominal mass; -- Dimensions. For all dimensions < 200 mm, the deviation shall be ± 1 mm of the nominal size; for other dimensions, the deviation shall be $\pm 0.5\%$. -- The deviation between the loading pad and the impactor loading position shall be ± 5 mm.

Note. Due to the existence of measurement uncertainty, the test results are considered unaffected when the above tolerances are met.

4.4 Test sequence All strength tests shall be performed on the same test piece in the order of the chapters in this document, while the durability test may be performed on different test

pieces. All tests for a specific component shall be performed on the same test piece.

4.5 Loading of storage components Unless otherwise specified, during strength and durability tests, all non-tested storage components, such as extension elements, shall be uniformly loaded in accordance with Table

1. Non-tested moving parts shall remain closed during the test. The volume of an extension element shall be calculated as the internal bottom area of the extension element multiplied by its net height, in cubic decimeters (dm³).

5 Test equipment and facilities

5.1 General Except for the impactor (see 5.2), the results of other tests do not depend on the test equipment, and other tests can be performed using appropriate equipment. The test equipment shall not hinder the deformation of the test piece, nor shall it cause abnormal deformation of the test piece. For example, the loading pad shall move as the product deforms during the test. All loading pads shall rotate as the direction of the applied force changes to ensure that the surface of the loading pad is in close contact with the test piece. If the loading pad slips, an anti-slip material shall be placed between the loading pad and the test piece.