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

GB 17927-2024

Replacing GB 17927.1-2011

**Safety technical specification for the fire retardant performance
of furniture**

家具阻燃性能安全技术规范

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Table of Contents

- 1 Scope
- 2 Normative references
- 3 Terms and definitions
- 4 Requirements
- 5 Ignition criteria
- 6 Verification methods
 - 6.1 Test safety facilities
 - 6.2 Test instruments and equipment
 - 6.3 Pretreatment and test environment
- 7 Result determination
- 8 Marks

Foreword

This document was drafted in accordance with the rules given in GB/T 1.1-2020 "Directives for standardization - Part

1.Rules for the structure and drafting of standardizing documents". This document replaces GB 17927.1-2011 "Upholstered furniture -- Assessment of the resistance to ignition of mattress and sofa -- Part

1.Smouldering cigarette" and GB 17927.2-2011 "Upholstered furniture -- Assessment of the resistance to ignition of mattress and sofa -- Part

2.Match flame equivalent". Compared with GB 17927.1-2011 and GB 17927.2-2011, in addition to structural adjustments and editorial changes, the main technical changes in this document are as follows:

a) Flame-retardant grade III has been added (see Chapter 4 of this Edition);

b) The test method for ignition source of wood pile has been added (see

6.6 of this Edition);

c) The length of the cigarette has been changed from (60±5) mm to (55±5) mm (see A.1 in Annex A of this Edition;

6.2 in GB 17927.1-2011). Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. The issuing authority shall not be held

responsible for identifying any or all such patent rights. This document was proposed by and shall be under the jurisdiction of Ministry of Industry and Information Technology of the People's Republic of China. Main drafting organizations of this document. The drafting organizations of this document. Main drafters of this document. Versions of standard substituted by this document are. - It was first published in 1999 as GB 17927.1-1999, and first revised in 2011; - It was first published in 2011 as GB 17927.2-2011; - This is the first integrated revision. Safety technical specification of flame resistance for furniture

1 Scope

China's mandatory technical regulation on the fire retardant performance of furniture - the upholstered seating and mattresses that are, in a domestic fire, both the first thing ignited and the thing that decides how fast the room becomes unsurvivable. A modern sofa or mattress is a large mass of foam and textile, and once it is properly alight it can take a room to flashover in a few minutes, producing dense smoke and carbon monoxide well before the flames reach anyone. The regulation exists to break that chain at the start: the ignition. It specifies the requirements, the inspection rules and the marking for the flame resistance of furniture, and describes the corresponding verification methods. The requirements are built on the two ignition sources that actually start these fires - the smouldering cigarette and the small open flame, a match or a lighter - and the test methods apply each to the composite as it is assembled, with its cover fabric, its interliner and its filling together, because that is what determines the outcome. A fabric and a foam that each pass alone can fail as a pair, and the reverse also happens, which is why the regulation refuses to certify components in isolation. Around that sit the inspection rules and the marking, which is what allows a purchaser, a hotel or a building operator to specify compliant furniture and to prove afterwards that they did. As a mandatory technical specification the document is a market access requirement: furniture that does not satisfy it may not be sold. Issued on 23 August 2024 and in force since 1 September 2025, it replaces GB 17927.1-2011.

This document specifies the requirements, inspection rules and marking for the flame resistance of furniture. It describes the corresponding verification methods. This document applies to the quality control of upholstered furniture and furniture upholstered parts.

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 28202-2020, Furniture industry terminology

3 Terms and definitions

For the purposes of this document, the terms and definitions defined in GB/T 28202- 2020 and the followings apply to this document.

3.1 flame resistance The property of inhibiting, slowing down or stopping the spread of flame.

3.2 afterglow Under specified test conditions, after the fire source is removed or the flaming combustion is terminated,

3.3 flaming A gaseous combustion process accompanied by luminescence.

4 Requirements

The flame resistance of upholstered furniture and furniture with soft covering parts in typical usage places shall not be lower than the corresponding requirements in Table 1.

5 Ignition criteria

5.1 Afterglow ignition The following phenomena are considered afterglow ignition.

5.2 Flaming ignition The following phenomena are considered as flaming ignition.

6.1 Test safety facilities

6.1.1 Test chamber The test chamber can be a room with a volume greater than 20 m³ (containing sufficient oxygen for the test), or a small space with ventilation facilities. The airflow rate around the test bench is

0.02 m/s~

0.2 m/s, which does not interfere with the combustion test.

6.2 Test instruments and equipment

6.2.1 Timer The timer shall have a range of no less than 60 min and an accuracy of 1 s.

6.2.2 Test platform The surface of the work platform shall be flat and solid to ensure that the specimen can be placed stably.

6.3 Pretreatment and test environment

6.3.1 Pretreatment environment Temperature. (23.0±2.0)°C. Relative humidity. (50.0±5.0)%. The pretreatment time of cigarette, wood pile ignition source and specimen is at least 24 h.

6.4 Ignition test of cigarette ignition source Perform the test in accordance with the provisions of Annex A.

6.5 Ignition test of simulating match flame ignition source Perform according to the provisions of Annex B.

6.6 Ignition test of wood pile ignition source Perform according to the provisions of Annex C.

7 Result determination

7.1 Selection of ignition source Select the corresponding ignition source in Table 1 according to the place where the furniture is used or the flame-retardant grade requirements.

7.2 Test result determination Carry out flame-retardant test according to the provisions of Annex A ~ Annex C.