

## TEST REPORT

No.: AJFTS25005337R03\_EN

Date: Aug 26,2025

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## LANGFANG LIUTAI FURNITURE CO, LTD

1009-1-6 BUILDING, SIJIHUAYU, ANCI DISTRACT, LANGFANG CITY, HEBEI PROVINCE

**Sample Description** : MATTRESS  
**Style/Item No.** : FM-01  
**Agent** : LANGFANG LIUTAI FURNITURE CO, LTD  
**P.O. / Ref No.** : LTM24-02  
**Buyer** : WAYFAIR/AMAZON  
**Supplier** : BAZHOU BOTAI FURNITURE CO, LTD  
**Manufacturer** : BAZHOU BOTAI FURNITURE CO, LTD  
**Country of Origin** : CHINA  
**Country of Destination** : UK

The above sample(s) data and information was / were submitted and identified on behalf of the client. SGS is not responsible for the authenticity, integrity and results of the data and information and / or the validity of the conclusion arising therefrom. Results apply to the sample as received.

\*\*\*\*\*

**SGS Ref. No.** : TJHL2508006413FT  
**Sample Receiving Date** : Aug 06,2025  
**Testing Period** : Aug 06,2025 to Aug 14,2025  
**Test Required** : BS 7177:2008 + A1:2011 Specification for resistance to ignition of mattresses, mattress pads, divans and bed bases, Low Hazard (domestic use).  
**Test result(s)** : See attached sheet

Signed for and on behalf of  
SGS-CSTC Standards Technical Services Co., Ltd Anji Branch



Echo Li  
Approved signatory

Verification:  
check.sgsonline.com.cn

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**Test Conducted:** BS 7177:2008 + A1:2011 Specification for resistance to ignition of mattresses, mattress pads, divans and bed bases, Low hazard (domestic use).

Clause	Principle /requirement		Result
4	<u>Performance requirements for resistance to ignition</u>		
	<u>4.1 Ignitability</u>		
	*4.1.1	<u>Composite test</u> 1) Smoldering cigarette test of BS EN 597-1:1995. 2) Match flame equivalent test of BS EN 597-2:1995.	See Annex I Pass Pass
	4.1.2	<u>Filling material test</u> All filling materials, including those used in mattress pads, shall pass the relevant test contained in the annexes given in Table 2.	See Annex II Pass
	4.2	<u>Durability of treatment</u> All outer covers and inner covers intended for high or very high hazard categories in Table 1 that have been chemically treated to reduce their ignitability shall be subjected to the water soaking and drying procedure specified in BS 5852:2006, Annex E prior to being conditioned.	NA
5	<u>Sampling and frequency of testing</u> A sample of each mattress, mattress pad, divan or bed base specification (ignoring differing spring types) shall be tested at the frequency specified in Table 3. Retesting shall be carried out where there is any major basic alteration to a specification		NC
6	<u>Labeling and Identification</u> Each mattress, upholstered mattress pad, divan or bed base shall carry a permanently attached and clearly readable label. The size of the graphic part of the label shall be not less than 50 mm x 50 mm. The base colour of the label shall be white with a blue border. The word "RESISTANT" shall appear on the border and shall be white and of minimum height 5 mm. A smouldering cigarette symbol, flame symbol and the ignition source number(s) shall appear in the central white area and shall be black. Information defining additional tests shall be included on the label for very high hazard mattresses and upholstered mattress pads. The following wording shall appear on the label: "Conforms to BS 7177:2008 for domestic use (low hazard)".		NP

Remark: NA = Not applicable; NC = Not conducted; NP - Not provided

Remark with \*: As per client's request, the top surface of mattress was tested only.

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**Test Specimen**

Description	Mattress
Color	White and Grey
Both surfaces are	<input checked="" type="checkbox"/> Different; <input type="checkbox"/> Identical
Size of sample	450 mm × 450 mm × 205 mm
Sample type	<input checked="" type="checkbox"/> Small scale; <input type="checkbox"/> Full size

**Conditioning**

Prior to testing, the specimens were conditioned at least 72 h in indoor ambient conditions and then immediately before the test for at least 16 h in an atmosphere having a temperature of  $23\pm2^{\circ}\text{C}$  and a relative humidity of  $50\pm5\%$ .

**Annex I: Composite Test**

These tests are conducted in accordance with low hazard of BS 7177:2008 + A1:2011, and the test methods are based on BS EN 597-1 & 2:1995.

**Test Results**

The following test results relate only to the ignitability of the sample or combination of materials under the particular condition of test. They are not intended as a means of assessing the full potential fire hazard of the materials or products in use.

1) BS EN 597-1:1995 Furniture – Assessment of the ignitability of mattresses and upholstered bed bases Part 1, Ignition source: smouldering cigarette.

Clause 3.1 Progressive smouldering ignition	1 <sup>st</sup>	2 <sup>nd</sup>
For the purpose of this standard, all the following types of behaviour are considered to be progressive smouldering ignition		
3.1 a) Any test specimen that displays escalating combustion behaviour is observed so it is unsafe to continue the test and active extinction is necessary;	No	No
3.1 b) Any test specimen that smoulders until it is essentially consumed within the test duration.	No	No
3.1 c) Any test specimen that smoulders to its full thickness within the duration of the test.	No	No
3.1 d) Any test specimen that smoulders for more than one hour.	No	No
3.1 e) On final examination (9.3), show evidence of charring more than 50mm in any horizontal direction from the nearest point of the original position of the source.	No	No

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Clause 3.2 Flaming ignition	1 <sup>st</sup>	2 <sup>nd</sup>
A flaming ignition is considered to be the occurrence of any flames initiated by a progressive smouldering source	No	No

**Detailed Results**

Test No. (Top surface)		1 <sup>st</sup>			2 <sup>nd</sup>		
Testing position		a	--	--	a	--	--
Progressive smouldering (PS) or Flaming (F)	No	--	--	--	No	--	--
Duration of	Ignition source (min, s)	19min28s	--	--	20min15s	--	--
	Flames (min, s)	0s	--	--	0s	--	--
	Smoke (min, s)	19min37s	--	--	20min25s	--	--
Extent of damage	Width (mm)	11	--	--	12	--	--
	Length (mm)	69	--	--	70	--	--
	Depth (mm)	3	--	--	4	--	--
Final examination of progressive smouldering (9.3)	No	--	--	--	No	--	--
Comments & observations	--	--	--	--	--	--	--
Result (NI-Non-ignition/I-Ignition)	NI	--	--	--	NI	--	--

**Overall Result:** [  ] Non-ignition; [  ] Smouldering ignition; [  ] Flaming ignition.

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2) BS EN 597-2 :1995 Furniture – Assessment of the ignitability of mattresses and upholstered bed bases  
 Part 2 Ignition source: match flame equivalent (15±1s)

Clause 3.1 Progressive Smouldering ignition	1 <sup>st</sup>	2 <sup>nd</sup>
For the purpose of this standard, all the following types of behaviour are considered to be progressive smouldering ignition		
3.1 a) Any test specimen that displays escalating combustion behaviour is observed so it is unsafe to continue the test and active extinction is necessary.	No	No
3.1 b) Any test specimen smoulders until it is essentially consumed within the test duration.	No	No
3.1 c) Any test specimen that smoulders to its full thickness within the duration of the test.	No	No
3.1 d) Any test specimen that smoulders for more than one hour.	No	No
3.1 e) If charring more than 50mm in any horizontal direction.	No	No

Clause 3.2 Flaming ignition	1 <sup>st</sup>	2 <sup>nd</sup>
For the purpose of this standard, all the following types of behaviour are considered to be flaming ignition		
3.2 a) Any test specimen that escalating combustion behaviour is observed so it is unsafe to continue the test and active extinction is necessary.	No	No
3.2 b) Any test specimen that burns until it is essentially consumed within the test duration.	No	No
3.2 c) Any test specimen on which any flame front reaches its extremities or pass through its full thickness within the duration of the test.	No	No
3.2 d) Any test specimen that flaming continues to more than 120s after removal of the burner tube.	No	No

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**Detailed Results**

Test No. (Top surface)	1 <sup>st</sup>			2 <sup>nd</sup>		
Testing position	a	--	--	a	--	--
Progressive smouldering (PS) or Flaming (F)	No	--	--	No	--	--
Duration of	Ignition source (min, s)	15s	--	--	15s	--
	Flames (min, s)	0s	--	--	0s	--
	Smoke (min, s)	23s	--	--	24s	--
Extent of damage	Width (mm)	14	--	--	15	--
	Length (mm)	22	--	--	24	--
	Depth (mm)	4	--	--	4	--
Final examination of progressive smouldering (9.3)	No	--	--	No	--	--
Comments & observations	--	--	--	--	--	--
Result (NI-Non-ignition/I-Ignition)	NI	--	--	NI	--	--

**Overall Result:** [ ✓ ] Non-ignition; [ ] Smouldering ignition; [ ] Flaming ignition.

Remark: a - flat portion of upper surface

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## Annex II: Filling Material Test

The Furniture and Furnishings (Fire) (Safety) Regulations 1988 S.I. No. 1324 (amended 1989, 1993 and 2010), Schedule 1 Part I. Crib 5 test (Ignition Source 5) of BS 5852 Part 2:1982.

### Test Specimen

Sample description	Foam
Color	White
Density (kg/m <sup>3</sup> )	41.3 kg/m <sup>3</sup>

### (A) Progressive smouldering

Criteria of failure (Clause 4.1 of BS 5852 part 2:1982)	1 <sup>st</sup>	2 <sup>nd</sup>
4.1 b) – Any composite that product externally detectable amounts of smoke, heat or glow 60 min after ignition of the crib.	No	No
4.1 c) – Any composite that displays escalating combustion behaviour so that it is unsafe to continue the test and requires forcible extinction.	No	No
4.1 d) – Any composite that smoulders until it is essentially consumed within the test duration relevant to the source	No	No
4.1 e) – Any composite that smoulders to the extremities of the specimen viz. upper or lower margins, either side or to its full thickness, within the duration of the test.	No	No
4.1 f) – Any composite that, on the final examination, shows evidence of charring other than discolouration, more than 100 mm in any direction apart from upwards from the nearest part of the original position of the source.	No	No

### (B) Flaming

Criteria of failure (Clause 4.2 of BS 5852 part 2:1982)	1 <sup>st</sup>	2 <sup>nd</sup>
4.2 b) – Any composite that continues to flame for more than 10 minutes after the ignition of the crib.	No	No
4.2 d) – Any composite that displays escalating combustion behaviour so that it is unsafe to continue the test and forcible extinction is required.	No	No
4.2 e) – Any composite that burns until it is essentially consumed within the test duration relevant to the source.	No	No
4.2 f) – Any composite on which any flame front reaches the lower margin, either side or passes through the full thickness of the specimen within the duration of the test.	No	No

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**(C) Mass Loss**

Criteria (Clause 5 in Schedule 1 of UK Regulations)	1 <sup>st</sup>	2 <sup>nd</sup>
If failure against the criteria of clause 4 of BS 5852:Part 2 has occurred but only by way of damage exceeding the limits defined in clause 4.1(e), 4.1(f) and 4.2(f) and provided that the resultant mass loss is less than 60g the foam passes the ignitability test.	35 g	39 g

**Detailed Results**

Test No.	1 <sup>st</sup>	2 <sup>nd</sup>
Progressive smouldering (PS) or Flaming (F)	No	No
Duration of	Ignition source (min, s)	2 min 17 s
	Flames (min, s)	3 min 08 s
	Smoke (min, s)	4 min 05 s
Extent of damage of horizontal component	Foam - Width (mm)	125
	Foam - Length (mm)	166
	Foam - Depth (mm)	62
Extent of damage of vertical component	Foam - Width (mm)	164
	Foam - Depth (mm)	61
Damage exceeds limits of clauses 4.1(e), 4.1(f) or 4.2(f)	No	No
Initial weight before test (g)	6152	6166
Final weight after test (g)	6117	6127
Resultant mass loss (g)	35	39
Reason for failure (Ref to failure code)	---	---
Final examination of progressive smouldering (9.4)	No	No
Comments & observations	---	---
Overall result	Pass	Pass

**Overall Result:** [  ] Pass, [  ] Fail

**Statement:** The decision rules for statements of conformity (Pass/Fail) have been applied to any results that results in a numerical value and are based on the probability conformance of 95% (UKAS LAB 48) agreed with the customer at the contract review stage.

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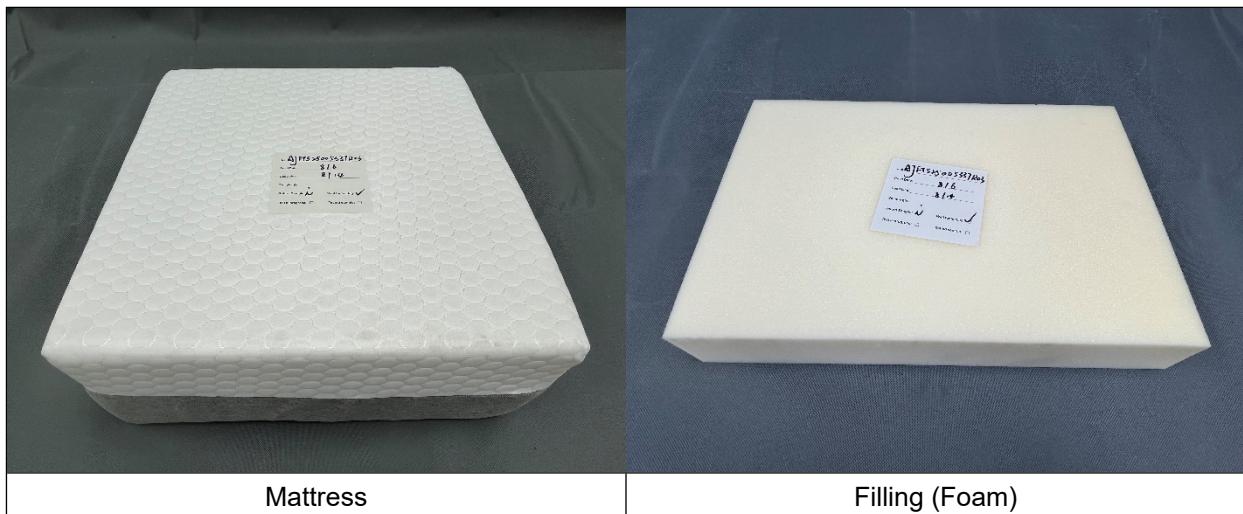
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### Photo Appendix:



Mattress

Filling (Foam)

SGS authenticate the photo on original report only

\*\*\*End of Report\*\*\*

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