

Test Report

Report No.: AJFS2308007470FF

Date: AUG.21, 2023

Page 1 of 9

LANGFANG LIUTAI FURNITURE CO, LTD

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

Sample Description: SOFA BED**SGS Ref No.:** TJHL2307005742FT**Style/Item No.:** SF-01**P.O. / Ref No.:** LT23-02**Supplier:** BAZHOU BOTAI FURNITURE CO, LTD**Buyer:** WAYFAIR/AMAZON**Manufacturer:** BAZHOU BOTAI FURNITURE CO, LTD**Agent:** LANGFANG LIUTAI FURNITURE CO, LTD**Country of Origin:** CHINA**Country of Destination:** UK

The above sample(s) 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. Test results apply to the sample as received.

Test Requested:

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

Test Results: -- See attached sheet --**Test Period:**

Sample Receiving Date : AUG.16, 2023

Test Performing Date : AUG.16, 2023 TO AUG.21, 2023

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



Echo Li
Approved Signatory

scan to see the report



AJFS2308007470FF



SGS-CSTC Standards Technical Services Co., Ltd.
Anji Branch Fire Technology Service

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

No. 301, Sunlight Road, 2 Block, Sunlight Industry Zone, Anji County, Zhejiang Province, China 313300 t (86-572) 5018825 f (86-572) 5018829 www.sgs.com.cn
中国·浙江·安吉县阳光工业园二区阳光大道301号 邮编: 313300 t (86-572) 5018825 f (86-572) 5018829 e sgs.china@sgs.com

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 smoldering 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



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

SGS-CSTC Inspection & Testing Services Co., Ltd.
Anji Branch Fire Technology Service

No. 301, Sunlight Road, 2 Block, Sunlight Industry Zone, Anji County, Zhejiang Province, China 313300 t (86-572) 5018825 f (86-572) 5018829 www.sgs.com.cn
中国·浙江·安吉县阳光工业园二区阳光大道301号 邮编: 313300 t (86-572) 5018825 f (86-572) 5018829 e sgs.china@sgs.com

Test Specimen:

Description / Color	Sofa Bed / Grey
Both surfaces are	[<input checked="" type="checkbox"/>] Different; [<input type="checkbox"/>] Identical
Size of sample	1980 mm x 610 mm x 800 mm
Sample type	[<input type="checkbox"/>] Small scale; [<input checked="" 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±2°C and a relative humidity of 50±5%.

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



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

No. 301, Sunlight Road, 2 Block, Sunlight Industry Zone, Anji County, Zhejiang Province, China 313300 t (86-572) 5018825 f (86-572) 5018829 www.sgs.com.cn
 中国·浙江·安吉县阳光工业园二区阳光大道301号 邮编: 313300 t (86-572) 5018825 f (86-572) 5018829 e sgs.china@sgs.com

Test Details:

Test No.		1 st			2 nd		
Top Surface / Testing position		a	b	c	a	b	c
Progressive smouldering (PS) or Flaming (F)		No	No	No	No	No	No
Duration of	Ignition source (min, s)	20min16s	21min10s	20min34s	19min30s	20min12s	19min46s
	Flames (min, s)	0s	0s	0s	0s	0s	0s
	Smoke (min, s)	20min22s	21min15s	20min41s	19min36s	20min20s	19min51s
Extent of damage	Width (mm)	12	10	11	9	10	10
	Length (mm)	68	67	70	68	67	69
	Depth (mm)	2	2	2	2	2	2
Final examination of progressive smouldering (9.3)		No	No	No	No	No	No
Comments & observations		No	No	No	No	No	No
Result (NI-Non-ignition/I-Ignition)		NI	NI	NI	NI	NI	NI

Sub-conclusion: [] Non-ignition; [] Smouldering ignition; [] Flaming ignition.



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

- 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 st	2 nd
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 st	2 nd
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



Test Details:

Test No.		1 st			2 nd		
Top Surface / Testing position		a	b	c	a	b	c
Progressive smouldering (PS) or Flaming (F)		No	No	No	No	No	No
Duration of	Ignition source (min, s)	15s	15s	15s	15s	15s	15s
	Flames (min, s)	0s	0s	0s	0s	0s	0s
	Smoke (min, s)	21s	19s	20s	20s	22s	22s
Extent of damage	Width (mm)	25	27	27	27	25	27
	Length (mm)	29	32	28	32	30	30
	Depth (mm)	2	2	2	3	2	2
Final examination of progressive smouldering (9.3)		No	No	No	No	No	No
Comments & observations		No	No	No	No	No	No
Result (NI-Non-ignition/I-Ignition)		NI	NI	NI	NI	NI	NI

Sub-conclusion: [] Non-ignition; [] Smouldering ignition; [] Flaming ignition.

Remark: a - flat portion of upper surface; b - junction between the seat and back; c - quilted line

At the request of the client, only the top surface of specimen was tested.



SGS-CSTC Anji Branch Fire Technology Service
Anji Branch Fire Technology Service

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

No. 301, Sunlight Road, 2 Block, Sunlight Industry Zone, Anji County, Zhejiang Province, China 313300 t (86-572) 5018825 f (86-572) 5018829 www.sgs.com.cn
中国·浙江·安吉县阳光工业园二区阳光大道301号 邮编: 313300 t (86-572) 5018825 f (86-572) 5018829 e sgs.china@sgs.com

Annex II: Filling material test

Test conducted: Filling material test is as per BS 5852 Part 2: 1982

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.

Sample Details:

Sample description / Color	Foam / White
Density (kg/m ³)	44.5 kg/m ³

(A) Progressive smouldering

Criteria of failure (Clause 4.1 of BS 5852 part 2:1982)	1 st	2 nd
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 st	2 nd
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

(C) Mass Loss

Criteria (Clause 5 in Schedule 1 of UK Regulations)	1 st	2 nd
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.	31 g	27 g



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

Test Details:

Test No.		1 st	2 nd
Progressive smouldering (PS) or Flaming (F)		No	No
Duration of	Ignition source (min, s)	2 min 16 s	2 min 24 s
	Flames (min, s)	5 min 01 s	4 min 37 s
	Smoke (min, s)	6 min 12 s	5 min 41 s
Extent of damage of horizontal component	Foam - Width (mm)	107	111
	Foam - Length (mm)	158	152
	Foam - Depth (mm)	71	69
Extent of damage of vertical component	Foam - Width (mm)	127	133
	Foam - Depth (mm)	52	56
Damage exceeds limits of clauses 4.1(e), 4.1(f) or 4.2(f)		No	No
Initial weight before test (g)		6397	6411
Final weight after test (g)		6366	6384
Resultant mass loss (g)		31	27
Reason for failure (Ref to failure code)		---	---
Final examination of progressive smouldering (9.4)		No	No
Comments & observations		No	No
Overall result		Pass	Pass

Sub-conclusion: [] 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.



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

Photo Appendix:



Mattress (Top surface)

Filling (Foam)

SGS authenticate the photo on original report only

End of Report



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

No. 301, Sunlight Road, 2 Block, Sunlight Industry Zone, Anji County, Zhejiang Province, China 313300 t (86-572) 5018825 f (86-572) 5018829 www.sgs.com.cn
 中国·浙江·安吉县阳光工业园二区阳光大道301号 邮编: 313300 t (86-572) 5018825 f (86-572) 5018829 e sgs.china@sgs.com