



Test Report

Date : 2023-04-13

No. : HT23040012

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Applicant : Medicare Plus Co., Ltd.
Rm E, 3/F., Phase 1, Hang Fung Ind. Bldg.,
2G Hok Yuen St., Hong Hum, Kowloon.

Attn.: Mr. Ronald Tse

Description of Sample(s) : Three (3) groups of submitted sample said to be
(A) PU Foam (White)
(B) Black striped fabric- Back section cover fabric
(C) Black fabric – Seat section cover fabric
Style No.: BNF, GLD882022, MD-OF-Chair-01
End use: Office Chair, Office Furniture, Home Furniture
Country of Origin: China
Country of Destination: Hong Kong

Date Sample(s) Received : 2023-04-11

Date Tested : 2023-04-11 to 2023-04-13

Investigation Requested : Selected test(s) as detailed herein.

Conclusion(s) : The submitted samples A, B and C (in composite) complied
with BS 7176:2007 + A1:2011 for medium hazard.



CHENG Chun-yiu, David,
Authorized Signatory

The Hong Kong Standards and Testing Centre Limited

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TEST RESULT(S):

Resistance to ignition of upholstered furniture

Ref. BS 7176:2007 + A1:2011

A. Filling Material Test – PU Foam

Ref. UK Furniture and Furnishings (Fire) (Safety) Regulations 1988 (amended 1989, 1993 and 2010)

Schedule 1 Part I: Ignitability test for polyurethane foam in slab or cushion form

Sample : Sample A
Test method : BS 5852 – Part 2:1982
Ignition source : Crib ignition source 5 as specified in BS 5852 – Part 2:1982
Conditioning of test specimen : A minimum of 16 hours at $20 \pm 5^{\circ}\text{C}$ and $50 \pm 20\%$ R.H.
Test condition : Temperature: 23°C , Relative humidity: 57%

The following test results relate only to the ignitability of the combination of upholstery composites under the particular conditions of test; they are not intended as a means of assessing the full potential fire hazard of the materials in use.

Ignitability performance index: P5 (Non-ignition/Pass). See summary below:

Criteria of failure (Clause 4 of BS 5852 – Part 2:1982)

Progressive smouldering failure

	<u>1st Test</u>	<u>2nd Test</u>
4.1(a) for source 2 or 3: any composite that produces externally detectable amounts of smoke, heat or glowing 30min after the removal of the burner tube	N.A.	N.A.
4.1(b) for source 4, 5, 6 or 7: any composite that produces externally detectable amounts of smoke, heat or glowing 60 min after ignition of the crib.	N.O.	N.O.
4.1(c) any composite that displays escalating combustion behaviour so that it is unsafe to continue the test and requires forcible extinction.	N.O.	N.O.
4.1(d) any composite that smoulders until it is essentially consumed within the test duration relevant to the source.	N.O.	N.O.
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.	N.O.	N.O.
4.1(f) any composite that, on 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.	N.O.	N.O.

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TEST RESULT(S):

<u>Flaming failure</u>	<u>1st Test</u>	<u>2nd Test</u>
4.2(a) for source 2 or 3: any composite that continues to flame for more than 120s after the removal of the burner tube	N.A.	N.A.
4.2(b) For sources 4 or 5: any composite that continues to flame for more than 10 minutes after the ignition of the crib.	N.O.	N.O.
4.2(c) For sources 6 or 7: any composite that continues to flame for more than 13 minutes after the ignition of the crib.	N.A.	N.A.
4.2(d) any composite that displays escalating combustion behaviour so that it is unsafe to continue the test and forcible extinction is required.	N.O.	N.O.
4.2(e) any composite that burns until it is essentially consumed within the test duration relevant to the source.	N.O.	N.O.
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.	N.O.	N.O.
the resultant mass loss (initial mass less final mass) is less than 60g.	Yes (Pass) (30)g	Yes (Pass) (33)g

Notes: 1. The flame ceased for 3 minutes 41 seconds for 1st test and 4 minutes 12 seconds for 2nd test.
2. 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 clauses 4.1(e), 4.1(f) and 4.2(f) and provided that the resultant mass loss (initial mass less final mass) is less than 60g the foam passes the ignitability test.

Remarks: 1. N.O. denotes: Not observed
N.A. denotes: Not applicable
2. The ignitability performance index of sample is designated by the number of the ignition source to which the sample was subjected under BS 5852: Part 2:1982 preceded by the letter 'P' if the specimen passed that test or by the letter 'F' if it failed.

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TEST RESULT(S):

B. Composite Test

Ref. Resistance to ignition of upholstered furniture (BS 7176:2007 + A1:2011)

Sample : Sample A + Sample B + Sample C (in composite)
Ignition Source : 1. Smouldering cigarette (BS EN 1021-1:2006)
2. Match flame equivalent (BS EN 1021-2:2006)
3. Wooden crib: source 5 (BS 5852:2006, clause 11)
Condition of test specimen : A minimum of 16 hours at $23 \pm 2^{\circ}\text{C}$ and $50 \pm 5\%$ R.H.
Test Condition : Temperature: 23°C , Relative humidity: 57%

The following test results relate only to the ignitability of the combination of upholstery composites under the particular conditions of test; they are not intended as a means of assessing the full potential fire hazard of the materials in use.

1. Smouldering cigarette: Non-ignition (Pass). Summary table shown as following:

Criteria of ignition

Progressive smouldering ignition

	<u>1st Test</u>	<u>2nd Test</u>
a) any test assembly that displays escalating combustion behaviour so that it is unsafe to continue the test and active extinction is necessary;	N.O.	N.O.
b) any test assembly that smoulders until it is largely consumed within the test duration;	N.O.	N.O.
c) any test assembly that the 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;	N.O.	N.O.
d) any test assembly that smoulders after one hour from beginning of the test;	N.O.	N.O.
e) any test assembly that, on final examination, shows evidence of active smouldering.	N.O.	N.O.

Flaming ignition

	<u>1st Test</u>	<u>2nd Test</u>
a) Flaming ignition is considered to be the occurrence of any flames initiated by a smouldering source.	N.O.	N.O.

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TEST RESULT(S):

2. Match flame equivalent: Non-Ignition (Pass). Summary table shown as following:

Criteria of ignition

Progressive smouldering ignition

	<u>1st test</u>	<u>2nd test</u>	<u>3rd test</u>
a) any test assembly that displays escalating combustion behaviour so that it is unsafe to continue the test and active extinction is necessary;	N.O.	N.O.	N.O.
b) any test assembly that smoulders until it is largely consumed within the test duration;	N.O.	N.O.	N.O.
c) any test assembly 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;	N.O.	N.O.	N.O.
d) any test assembly that smoulders after one hour from beginning of test;	N.O.	N.O.	N.O.
e) any test assembly that, on final examination , shows evidence of active smouldering	N.O.	N.O.	N.O.

Flaming ignition

	<u>1st test</u>	<u>2nd test</u>	<u>3rd test</u>
a) any test assembly that displays escalating combustion behaviour so that it is unsafe to continue the test and active extinction is necessary;	N.O.	N.O.	N.O.
b) any test assembly that burns until it is essentially consumed within the test duration;	N.O.	N.O.	N.O.
c) any test assembly on which any flame front reaches the lower margin, either side or passes through its full thickness within the duration of the test;	N.O.	N.O.	N.O.
d) any flaming which continues for more than 120 s after removal of the burner tube.	N.O.	N.O.	N.O.

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TEST RESULT(S):

3. Wooden crib: source 5 - Ignitability performance index: BS 5852:2006 Clause 11 NI/5 (Pass).
Summary table shown as following:

Criteria of ignition

Progressive smouldering ignition

	<u>1st test</u>	<u>2nd test</u>
a) any test specimen that displays escalating smouldering combustion behaviour so that it is unsafe to continue the test and forcible extinction is required;	N.O.	N.O.
b) for the smouldering cigarette source 0: any test specimen that produces externally detectable amounts of smoke, heat or glowing within the period from the extinction of the source until 60 min after placement of the source.	N.A.	N.A.
c) for all flaming ignition sources: any test specimen that smoulders until it is essentially consumed or that smoulders to the extremities of the specimen, i.e. to either side or to/through the full thickness of the specimen, within the duration of the test;	N.O.	N.O.
d) for flaming ignition sources 2 and 3: any test specimen that produces externally detectable amounts of smoke, heat or glowing 15min after removal of the burner tube;	N.A.	N.A.
e) for flaming ignition sources 4, 5, 6 and 7: any test specimen that produces externally detectable amounts of smoke, heat or glowing 60 min after ignition of the crib;	N.O.	N.O.
f) any test specimen that, on final examination, shows evidence of charring within the filling (other than discolouration) more than 100 mm in any direction, apart from upwards, from the nearest part of the original position of the source.	N.O.	N.O.

Flaming ignition

	<u>1st test</u>	<u>2nd test</u>
a) any test specimen that displays escalating flaming combustion behaviour so that it is unsafe to continue the test and forcible extinction is required.	N.O.	N.O.
b) any test specimen that burns until it is essentially consumed within the test duration.	N.O.	N.O.
c) any test specimen on which any flame front reaches the extremities of the specimen other than the top of the vertical part of the test specimen, or passes through the full thickness of the specimen within the duration of the test.	N.O.	N.O.
d) for flaming ignition sources 2 and 3: any test specimen that continues to flame for more than 120 s after removal of the burner tube or in which the flame front spreads past a vertical line 100 mm from the tip of the burner tube;	N.A.	N.A.
e) for flaming ignition sources 4 and 5: any test specimen that continues to flame for more than 10 min after ignition of the crib;	N.O.	N.O.

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| f) | for flaming ignition sources 6 and 7: any test specimen that continues to flame for more than 13 min after ignition of the crib; | N.A. | N.A. |
| g) | for all sources: any test specimen from which flaming debris causes an isolated floor fire that continues to flame for longer than the time given in d), e) or f) | N.O. | N.O. |

TEST RESULT(S):

Note: The flame ceased for 4 minutes 37 seconds for 1st test and 4 minutes 15 seconds for 2nd test.

- Remarks:
1. N.O. denotes: Not observed
N.A. denotes: Not applicable
 2. Water-soaking procedure was conducted for covering material in according with BS 5852:2006, Annex E.
 3. The ignitability performance index of assembly is designated by the number of the section of BS 5852:2006 together with the ignition source to which the test specimen was subjected preceded by the letters 'NI' if the specimen did not ignite or by the letter 'I' if it did ignite.

Remark: Decision rule
For specification with upper limit, compliance is deemed to occur if the measured result is under the limit, even extended upwards by the expanded uncertainty with 95% coverage probability;
For specification with lower limit, compliance is deemed to occur if the measured result is above the limit, even extended downwards by the expanded uncertainty with 95% coverage probability;

***** End of Test Report *****

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