



STC Test Report

Date: 2008-10-20

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No: HT188173

- Applicant (MIH007)** : Hills (Hong Kong) Company Ltd.
Unit A, 3/F., Block 2, Koon Wah Mirror Factory,
Sixth Industrial Building, 7-9 Ho Tin Street,
Tuen Mum, Hong Kong.
- Attn.: Ray Leung/ Gillian Wong
- Description of Sample(s)** : Two (2) groups of submitted sample said to be
(A) WHITE FOAM
(B) PVC LEATHER, V3N3B7R/ 275F, THILLS/ 1012-1,
Color: M906747, V-ZI紋/ T4, 1.0mm x 54”
P/O No.: T066-08
- Date sample(s) Received** : (A) 2008-10-13
(B) 2008-10-14
- Date Tested** : 2008-10-13 to 2008-10-17
- Investigation Requested** : Selected test(s) as detailed herein.
- Conclusion(s)** : The submitted samples A and B (in composite) complied
with BS 7176:1995 Amendment No. 1: 2003 for medium
hazard.



CHENG Chun-yin
Textile and Materials Department
For and on behalf of

The Hong Kong Standards and Testing Centre Ltd.

SATRA Accredited Laboratory
International Safe Transit Association (ISTA) Certified Laboratory
Members of
Hong Kong Apparel Society Limited
Hong Kong Footwear Association

Approved Laboratory of The Woolmark Company
The Govmark Fire Laboratories Certified Laboratory

Hong Kong Association for Testing, Inspection and Certification Limited
Knitwear Innovation and Design Society (KIDS)

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TEST RESULT(S):

Resistance to ignition of upholstered furniture

Ref. BS 7176:1995 Amendment No.1: 2003

A. Filling Material Test – PU Foam

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

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 ± 5°C and 50 ± 20% R.H.
Test condition	: Temperature: 25°C, Relative humidity: 56%

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.

Test Result :

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 RESULTS:

<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.	O.	N.O.
the resultant mass loss (initial mass less final mass) is less than 60g.	Yes (Pass) (37g)	Yes (Pass) (24g)

Note : 1. The flame ceased for 4 minutes 11 seconds for 1st test and 3 minutes 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
O. denotes: 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 RESULTS:

B. Composite Test

Ref. Resistance to ignition of upholstered furniture (BS 7176: 1995 Amendment No. 1: 2003)

Sample : Sample A + Sample B (in composite)

Ignition Source : 1. Smouldering cigarette (BS EN 1021-1:1994)
 2. Match flame equivalent (BS EN 1021-2:1994)
 3. Wooden crib: source 5 (BS 5852:1990 Amendment No.2 :1994, Section 4)

Condition of test specimen : A minimum of 16 hours at 23 ± 2°C and 50 ± 5% R.H..

Test Condition : Temperature: 25°C, Relative humidity: 56%

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.

Test Result:

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

Criteria of ignition

<u>Progressive smouldering ignition</u>	<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 essential 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 for more than one hour.	N.O.	N.O.
e) any test assembly that, on final examination, shows evidence of charring other than discolouration, for more than 100 mm in any direction apart from the upwards from the nearest part of the original position of the source.	N.O.	N.O.

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TEST RESULTS:

Flaming 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 burns until it is essentially consumed within the test duration;	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.

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>
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 essentially consumed within the test duration ;	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.
d) any test assembly that smoulders for more than one hour;	N.O.	N.O.
e) any test assembly that , on final examination , shows evidence of charring other than discolouration , for 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 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 burns until it is essentially consumed within the test duration ;	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.
d) any flaming which continues for more than 120 s after removal of the burner tube.	N.O.	N.O.

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TEST RESULTS:

3. Wooden crib: source 5 : Ignitability performance index : section 4 NI/5(Pass). See summary below:

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 all flaming sources: any test specimen that smoulders until it is essentially consumed or that smoulders to the extremities of the specimen, that is to either side or to the full thickness of the specimen, within the duration of the test;	N.O.	N.O.
c) 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.
d) 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.
e) 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;	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.
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 debris causes an isolated floor fire not meeting the requirements of items d), e) or f).	N.O.	N.O.

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TEST RESULTS:

Note : The flame ceased for 3 minutes 31 seconds for 1st test and 3 minutes 24 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 EN 1021-1: 1994 & BS EN 1021-2: 1994 annex D for source 0 and source 1.
 3. Water-soaking procedure was conducted for covering in according with BS5651: 1989 for source 5.
 4. The ignitability performance index of assembly is designated by the number of the section of BS 5852:1990 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.

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

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