

Test Report

No. GLHGR070801346FT

Date: AUG.28, 2007

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SHENZHEN HENG ANG INDUSTRIES CO., LTD

ZHANGBEI INDUSTRIAL AREA, AILIAN, LONGGANG DISTRICT, SHENZHEN CITY

SGS Ref No.: AJD2708151

SUBJECT: Requirements and Test Procedure for Resistance of a Mattress/Box Spring Set to a Large Open-Flame.

SAMPLE ID: The mattress sample, without foundation, identified as "HA-0307" was received from the client on 8/20/2007. The sample was received in good condition and was described by the manufacturer as containing the following items:

- Product Description: MEMORY MATTRESS
- Model Name: SZ-0307HA
- Prototype Identification: HA-0307
- Construction Type: 3"MEMORY FOAM+7"FOAM
- Barrier/Interliner: FIRE RETARDANT FABRIC
- Mattress Ticking: 70% COTTON+30% TERYLENE
- Overall Size: 38"x74"x10"

TEST REQUESTED: The sample was tested in accordance with 16 CFR 1633, Test Configuration B. No revisions to this report will be allowed after 90 days of the report date.

TEST DATE: 8/27/2007

CONDITIONING: Test Room: 54% RH, 23°C, Time Out of Conditioning Room: 5 minutes

RESULTS: Results can be found on the following pages and only apply to the sample tested.

CONCLUSION: The mattress set tested complies with the requirements of 16 CFR 1633.

Signed for and on behalf of
SGS-CSTC Co., Ltd.Owen Chen
Engineer

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Test Procedure and Results

PROCEDURE:

The sample was conditioned before testing for 48 hours at 70°F ± 5°F and a relative humidity less than 55%.

The mattress was placed on a metal test frame inside a test room having dimensions of 10' X 12' with an 8' high ceiling. The mattress and frame were located on the wall opposite the doorway. The room is configured in accordance with Test Room Layout Option B as specified in 16 CFR 1633.

The ignition source was the NIST Dual Burner System constructed of stainless steel tubing. The fuel used was commercial propane delivered at a rate of 12.9 l/min to the top burner for a total time of 70 seconds and a rate of 6.6 l/min to the side burner for a total time of 50 seconds.

After ignition of the burner, we monitored recorded certain properties of the test procedure. These properties are Heat Release Rate, Total Heat and ceiling temperature directly over the specimen at 4" below the ceiling.

Photos and video were taken of the specimen during the procedure. Please reference PHOTOS 1 through 2 for photos of representative samples before and after testing to this standard. Sampling was monitored throughout the test at a rate of 1 second. Heat Release equipment meets and exceeds requirements by ASTM E 1590 for accuracy.

The test was conducted at the following address:

SGS-CSTC Standards Technical Services Co., Ltd AnJi Branch
No.2 Tongbiao Road, Fantan Industrial Park Economic & Technology Development District,
AnJi County, Zhejiang Province, China

To be continued....



RESULTS:

Sample: HA-0307 (1)

Test Date: 8/27/2007

Data:

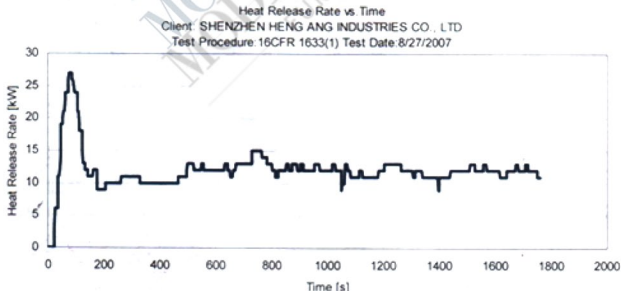
<u>Measurement Type</u>	<u>Initial Value</u>	<u>Maximum Value</u>	<u>Time Occurred</u>	<u>Allowed Value</u>	<u>Pass / Fail</u>
Ceiling Temp (°C)	24.0	48.0	00:01:08	-	-
Heat Release Rate (kW)	0	27.0	00:01:16	200	PASS
Total Heat Release – First 10 Min (MJ)	0	7.1	00:10:00	15.0	PASS

Total Test Time, (hr:min:sec): 0:30:00

Please reference Figure 1 and 2 for graphical representation of the Heat Release Rate and Total Heat Release.

OBSERVATIONS:

- 15:40 – Sample was removed from conditioning room
- 15:44 – Test was started
- 15:45 – Some flame and melted drops appeared after removal of the burner
- 15:48 – The burned area became larger and larger
- 16:10 – Appeared to be holding steady
- 16:14 – Test was stopped

GRAPHICAL RESULTS:

Figure 1. Heat Release Rate vs. Time Graph

To be continued...

Total Heat Release vs. Time
 Client: SHENZHEN HENG ANG INDUSTRIES CO., LTD
 Test Procedure: 16CFR 1633(1) Test Date: 8/27/2007

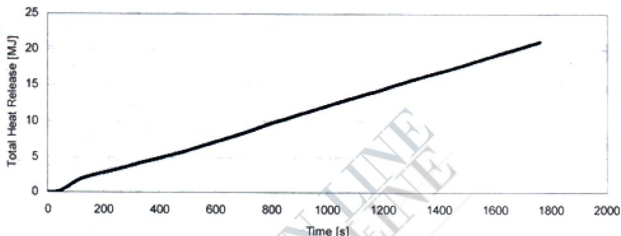


Figure 2. Total Heat Release vs. Time Graph

Sample: HA-0307 (2)

Test Date: 8/27/2007

Data:

<u>Measurement Type</u>	<u>Initial Value</u>	<u>Maximum Value</u>	<u>Time Occurred</u>	<u>Allowed Value</u>	<u>Pass / Fail</u>
Ceiling Temp (°C)	24.0	51.0	00:01:05	-	-
Heat Release Rate (kW)	0	32.0	00:01:05	200	PASS
Total Heat Release – First 10 Min (MJ)	0	7.5	00:10:00	15.0	PASS

Total Test Time, (hr:min:sec): 0:30:00

Please reference Figure 1 and 2 for graphical representation of the Heat Release Rate and Total Heat Release.

OBSERVATIONS:

- 16:29 – Sample was removed from conditioning room
- 16:33 – Test was started
- 16:34 – Little flame appeared on the top surface
- 16:43 – The burned area extended became large
- 16:53 – Flame kept burning on the mattress
- 17:03 – Test was stopped

To be continued ...

GRAPHICAL RESULTS:

Heat Release Rate vs. Time
 Client: SHENZHEN HENG ANG INDUSTRIES CO., LTD
 Test Procedure: 16CFR 1633(2) Test Date 8/27/2007

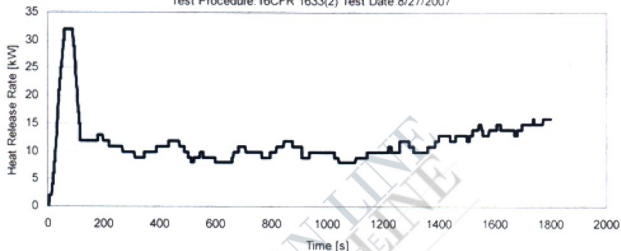


Figure 3. Heat Release Rate vs. Time Graph

Total Heat Release vs Time
 Client: SHENZHEN HENG ANG INDUSTRIES CO., LTD
 Test Procedure: 16CFR 1633(2) Test Date: 8/27/2007

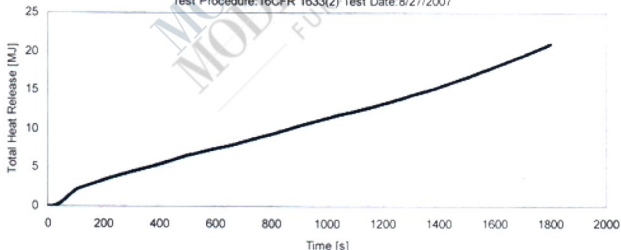
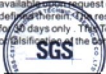


Figure 4. Total Heat Release vs. Time Graph

To be continued ...



Sample: HA-0307 (3)

Test Date: 8/27/2007

Data:

Measurement Type	Initial Value	Maximum Value	Time Occurred	Allowed Value	Pass / Fail
Ceiling Temp (°C)	24.0	50.0	00:01:01	-	-
Heat Release Rate (kW)	0	33.0	00:01:01	200	PASS
Total Heat Release – First 10 Min (MJ)	0	6.9	00:10:00	15.0	PASS

Total Test Time, (hr:min:sec): 0:30:00

Please reference Figure 1 and 2 for graphical representation of the Heat Release Rate and Total Heat Release.

OBSERVATIONS:

- 10:05 – Sample was removed from conditioning room
- 10:07 – Test was started
- 10:08 – Flame appeared and some melted drops were found
- 10:18 – Flame spreaded to the both sides gradually
- 10:28 – Flame kept burning and appeared to be holding steady
- 10:37 – Test was stopped

GRAPHICAL RESULTS:

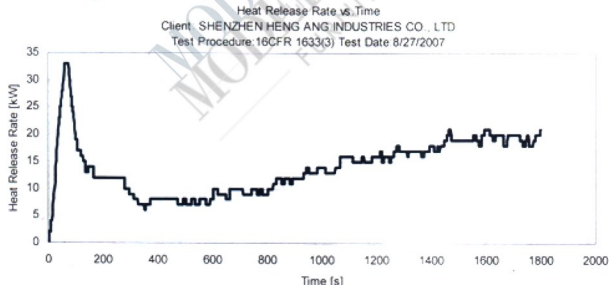


Figure 5. Heat Release Rate vs. Time Graph

To be continued...

Total Heat Release vs. Time
 Client: SHENZHEN HENG ANG INDUSTRIES CO., LTD
 Test Procedure: 16CFR 1633(3) Test Date: 8/27/2007

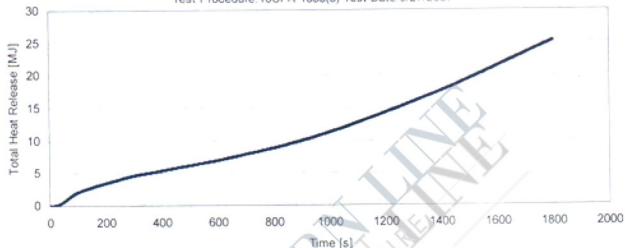


Figure 6. Total Heat Release vs. Time Graph

PHOTOS:



PHOTO 1. Mattress Before Testing To 16 CFR 1633



PHOTO 2. Mattress After Testing To 16 CFR 1633

Remark: This test was subcontracted to SGS other qualified subcontractor.

End of Report

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