

Test Report No. SDHGR110902011FM

Date: Oct 10, 2011

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FOSHAN RUIXIN NON WOVEN CO. LTD RAYSON INDUSTRIAL ZONE, HONGXING VILLAGE, GUANYAO, NANHAI DISTRICT, FOSHAN CITY, GUANGDONG, CHINA

The following sample(s) was / were submitted and identified on behalf of the client as: Sample Description : RAYSON MATTRESS

Prototype ID	: RAYSON660089
Model Name	: RAYSON MATTRESS
Sample Receiving Date	: Sep 28, 2011
Test Performing Date	: Sep 28, 2011 to Oct 09, 2011
Test Requested	: The sample was tested in accordance with 16 CFR 1633, Test Configuration A. No revisions to this report will be allowed after 90 days of the report date.
Test Type	: Prototype Test
Conditioning	: Test Room: (60±5)% RH, 68°F ~80°F (20-27) ℃;
	Time Out of Conditioning Room: 5 minutes
Result	: Results can be found on the following pages and only apply to the sample tested.
Conclusion	: The mattress sets tested comply with the requirements of 16 CFR 1633.

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

Jack Yao Approved signatory

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The following sample(s) was / were submitted and identified on behalf of the client as:

: The mattress sample, without foundation, identified as "RAYSON660089" Sample ID was received from the client on FOSHAN RUIXIN NON WOVEN CO. LTD. The sample was received in good condition and was described by the manufacturer as containing the following items: Prototype ID : RAYSON660089 Model Name : RAYSON MATTRESS Insulation : FIRE RESISTANT FIBERS Construction Type : SPRING MATTRESS Foam Padding : FOAM Barrier / Liner : FIRE RESISTANT FIBERS **Overall Size** :54"×80" Mattress Ticking : FABRIC

Test Procedure and Results

PROCEDURE:

The sample was conditioned before testing for 48 hours at $66\degree F \sim 72\degree F$ (21±2)°C and a relative humidity (50±2)%.

The mattress was placed on a metal test frame and catch surface under the center of an open hood. The open hood and open calorimeter test room were configured in accordance with open calorimeter layout Option A 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 and Total.

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 Shunde Branch 1st Floor, Building 1 of European Industrial Park, No.1 Shunhenan Road, Wusha Section, Daliang Town, Shunde of Foshan, Guangdong Province, China

To be continued....

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Test Report

RESULTS: Sample 1: Test Date: Oct 09, 2011 Data:

<u>Measurement</u> <u>Type</u>	<u>Initial</u> <u>Value</u>	<u>Maximum</u> <u>Value</u>	<u>Time</u> <u>Occurred</u>	<u>Allowed</u> <u>Value</u>	<u>Pass / Fail</u>
Heat Release Rate (kW)	0	30.0	00:00:44	200	PASS
Total Heat Release – First 10 Min (MJ)	0	2.1	00:10:00	15.0	PASS

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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:

- 09:30 Sample was removed from conditioning room.
- 09:35 Test was started.
- 09:37 After the ignition source extinguished, the mattress was ignited and flame was small and spread on the side and upper surface.
- 09:40 Flame was self-extinguished.
- 10:05 The test was stopped.

GRAPHICAL RESULTS:





To be continued....

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Figure2. Total Heat Release vs. Time Graph

Sample 2:	
Test Date: Oct 09,	2011
Data:	

<u>Measurement</u> <u>Type</u>	<u>Initial</u> Value	<u>Maximum</u> <u>Value</u>	<u>Time</u> <u>Occurred</u>	<u>Allowed</u> <u>Value</u>	<u>Pass / Fail</u>
Heat Release Rate (kW)	0	31.0	00:00:54	200	PASS
Total Heat Release – First 10 Min (MJ)	0	6.1	00:10:00	15.0	PASS

Total Test Time, (hr: min: sec): 0:30:00 Please reference Figure 3 and 4 for graphical representation of the Heat Release Rate and Total Heat Release.

OBSERVATIONS:

- 10:30 Sample was removed from conditioning room.
- 10:35 Test was started.
- 10:37 After the ignition source extinguished, the mattress was ignited and flame was small and spread on the side and upper surface.
- 10:40 Flame was self-extinguished.
- 11:05 The test was stopped.

To be continued....

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 GRAPHICAL RESULTS:
 Heat Deleges Date vs. Time



Figure 3. Heat Release Rate vs. Time Graph





To be continued....

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Sample 3: Test Date: Oct 09, 2011 Data:

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Measurement Type	<u>Initial</u> <u>Value</u>	<u>Maximum</u> <u>Value</u>	<u>Time</u> <u>Occurred</u>	<u>Allowed</u> <u>Value</u>	<u>Pass / Fail</u>
Heat Release Rate (kW)	0	36.0	00:01:01	200	PASS
Total Heat Release – First 10 Min (MJ)	0	5.8	00:10:00	15.0	PASS

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

Please reference Figure 5 and 6 for graphical representation of the Heat Release Rate and Total Heat Release.

OBSERVATIONS:

- 11:20 Sample was removed from conditioning room.
- 11:25 Test was started.
- 11:27 After the ignition source extinguished, the mattress was ignited and flame was small and spread on the side and upper surface.
- 11:30 Flame was self-extinguished.
- 11:55 The test was stopped.

GRAPHICAL RESULTS:



Figure 5. Heat Release Rate vs. Time Graph

To be continued....

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Figure 6. Total Heat Release vs. Time Graph



PHOTO 1. Mattress Before Testing To 16 CFR 1633



<u>Remark</u>: For testing details, please refer to the enclosed video.

End of Report

