



Test Report

No.: SHHG1410037503FT

Date: OCT. 29, 2014

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HAWORTH FURNITURE (SHANGHAI) CO., LTD.

360 XI YA ROAD, WAI GAO QIAO FREE TRADE ZONE, SHANGHAI 200131 CHINA

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

Sample Description : WHY OTTOMAN 1PC
Sample Receiving Date : OCT. 20, 2014
Testing Period : OCT. 20, 2014 TO OCT. 29, 2014
Test Performed : SELECTED TEST(S) AS REQUESTED BY APPLICANT
Test Requested : ANSI/BIFMA X5.4-2012: LOUNGE SEATING - TESTS-
AMERICAN NATIONAL STANDARD FOR OFFICE
FURNITURE
Test Result(s) : FOR FURTHER DETAILS, PLEASE REFER TO THE
FOLLOWING PAGE(S)
Conclusion : THE SUBMITTED SAMPLE MET THE TEST
REQUIREMENT.

Signed for and on behalf of
SGS-CSTC Ltd.

Vincent Feng
Technical Manager

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Test Conducted:

ANSI/BIFMA X5.4-2012: Lounge and Public Seating - Tests– American National Standard For Office Furniture		
Testing Condition	:	All the physical test is carry out in indoor ambient.
Nos. of Specimen	:	1 pc.
Type	:	Type II Style D
Test Result	:	Pass

Tests Item	Test method and Requirements	Results-Remark	Rating
5 Back Strength Test - Static - Horizontal - Static (Functional Load)	No loss of serviceability when 667N (150lbs.) is applied simultaneously for 1 min. Applied 90° to the back at 16 in. above the seat.	Without back	Not applicable
5 Back Strength Test - Static - Horizontal - Static (Proof Load)	No loss of serviceability when 1112N (250lbs.) is applied simultaneously for 1 min. Applied 90° to the back at 16 in. above the seat.	Without back	Not applicable
6 Back Strength Test - Static - Vertical- Static (Functional Load)	No loss of serviceability when 890N (200lbs.) is applied simultaneously for 1 min.	Without back	Not applicable
6 Back Strength Test - Static - Vertical- Static (Proof Load)	No loss of serviceability when 1334N (300lbs.) is applied simultaneously for 1 min.	Without back	Not applicable
7 Back Durability Test – Static – Horizontal – Cyclic	This test does not apply to unit with backrest greater than 38in. in height or backs with overall thickness of less than 50mm. No loss of serviceability in 120000cycles with a 102kg (225lbs.) in the center of each seat and a force of 334N (75lbs.) 90° to the center of the chair back. Test frequency: 20cyclers per minutes	Without back	Not applicable
8 Back Durability Test – Static – Vertical – Cyclic	This test does not apply to unit with backrest greater than 38in. in height or backs with overall thickness of less than 50mm. No loss of serviceability after applying a vertical downward force of 890N (200lbs.) at the top of the backrest for 10000cycles. Test frequency: 20cyclers per minutes	Without back	Not applicable

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Tests Item	Test method and Requirements	Results-Remark	Rating
9 Arm Strength Test Horizontal – Static (Function Load)	No loss of serviceability when 445N (100lbs.) for 1 min. is applied horizontal inward and outward to the armrest at the most forward point of the armrest	Without arm	Not applicable
9 Arm Strength Test Horizontal – Static (Proof Load)	No sudden and major change in the structural integrity (loss of serviceability is acceptable) when 666N (150lbs.) for 1min. is applied horizontally outward and inward to the armrest at the most forward point the armrest.	Without arm	Not applicable
10 Arm Strength Test Vertical – Static (Function Load)	No loss of serviceability when apply the vertical load uniformly applied along a 127mm (5in.) length at the apparent weakest point with the following force, for 1 min. <ul style="list-style-type: none"> - For units with armrest width of greater than 75 mm (3 in.) a force of 890 N (200 lbf.). - For units with an armrest width of less than or equal to 75 mm (3 in.). a force of 750 N (169 lbf.). 	Without arm	Not applicable
10 Arm Strength Test Vertical – Static (Proof Load)	No sudden and major change in the structural integrity (loss of serviceability is acceptable) when apply the vertical load uniformly applied along a 127mm (5in.) length at the apparent weakest point with the following force, for 1 min. <ul style="list-style-type: none"> - For units with armrest width of greater than 75 mm (3 in.) a force of 1335N (300 lbf.). - For units with an armrest width of less than or equal to 75 mm (3 in.). a force of 1125N (253 lbf.). 	Without arm	Not applicable
11 Arm Durability Test for Multiple Seat Units - Horizontal – Cyclic	There shall be no loss of serviceability when apply a 445 N (100 lbf.) force at an appropriate rate between 10 and 30 cycles per minute for 50,000 cycles. Test frequency: 20cycles per minutes.	Without arm	Not applicable
12 Arm Durability Test for Multiple Seating Units - Vertical – Cyclic	There shall be no loss of serviceability when apply a 667 N (150 lbf.) force at an appropriate rate between 10 and 30 cycles per minute for 10,000 cycles. Test frequency: 20cycles per minutes.	Without arm	Not applicable
13 Arm Durability Test for Single Seat Units - Angular – Cyclic	Simultaneously apply a force of 400 N (90 lbf.) to each arm initially at a $10^{\circ} \pm 1^{\circ}$ degree angle for 60,000 cycles at a rate between 10 and 30 cycles per minute. There shall be no loss of serviceability to the unit.	Without arm	Not applicable

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Tests Item	Test method and Requirements	Results-Remark	Rating
14 Seating Durability Tests – Cyclic	No loss of serviceability after 100,000cycles impact. A weight of 57kg (125lbs.) free falls onto the seat from 3.6 in. height for each seating. Test frequency: 20cycles per minutes.	/	Pass
15 Drop Test – Dynamic (Functional Load)	No loss of serviceability when 102kg (225lbs.) weight free falls from 6in. height to the center of the seat for each seating.	/	Pass
15 Drop Test – Dynamic (Proof Load)	No loss of serviceability when 136kg (300lbs.) weight free falls from 6in. height to the center of the seat for each seating.	/	Pass
16 Leg Strength Test -Front Load (Functional Load)	No loss of serviceability when a force of 334 N (75 lbf.) is applied once to each front leg individually for one (1) minute.	/	Pass
16 Leg Strength Test -Front Load (Proof Load)	No sudden and major change in the structural integrity when a force of 503 N (113 lbf.) is applied once to each front leg individually for one (1) minute.	/	Pass
16 Leg Strength Test -Side Load (Functional Load)	No loss of serviceability when a force of 334N (75lbf.) is applied once to each front and rear leg individually for 1 minute.	/	Pass
16 Leg Strength Test -Side Load (Proof Load)	No sudden and major change in the structural integrity when a force of 503 N (113 lbf.) is applied once to each front leg individually for one (1) minute.	/	Pass
17 Unit Drop Test – Dynamic	No loss of serviceability after lifting one end of the unit specified as below and allowing it to drop freely. Repeat a) on the opposite end of the unit.	Drop height :180mm	Pass
18 Caster/Unit Base Durability Test – Cyclic	No loss of serviceability after 500cycles over a hard surface with obstacles and 2500cycles over a smooth hard surface without obstacles under a 113kg (250lbs.) load on the seat. Test stroke is 762mm minimum. The caster should not separate under 22N pulling force in line with the caster stem after the cyclic test	Without caster	Not applicable

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Tests Item	Test method and Requirements	Results-Remark	Rating
18 Caster/ Unit Frame Durability Test for Unit with leg	For single unit: No loss of serviceability after 500cycles over a hard surface with obstacles and 25000cycles over a smooth hard surface without obstacles under a 113kg (250lbs.) load on the seat. Test stroke is 762mm minimum. The caster should not separate under 22N pulling force in line with the caster stem after the cyclic test For multiple unit: No loss of serviceability after 250cycles over a hard surface with obstacles remain unloads on the seat. Test stroke is 762mm (30in.) minimum. And no part of the caster shall separate from the base as a results of the application of the 22N force	Without caster	Not applicable
19 Swivel Test – Cyclic	No loss of serviceability after 120000cycles of rotation under a 113kg (250lbs.) load on center of the seat	Non-swivel	Not applicable
20 Tilt Mechanism Test – Cyclic	No loss of serviceability after 200000cycles under a 102kg (225lbs.) load to the center of te seat	Non-tilt	Not applicable
21 Stability Test - Rear Stability for Non-tilting Units	Load the chair with 6 disks, apply a horizontal force to the highest disk, The location of the force application is 6 mm (0.25 in.) from the top of the disk. For chairs with seat height less than 710 mm (28.0 in.), calculate the force as follows: • $F = 0.1964 (1195 - H)$ Newton. H is the seat height in mm. • $[F = 1.1 (47 - H)$ pounds force.]. H is the seat height in inches. For chairs with seat height equal to or greater than 710 mm (28.0 in.), a fixed force of 93 N (20.9 lbf.) shall be applied. The chair shall not tip over.	Without back	Not applicable
21 Stability Test - Rear Stability for Tilting Units	Load the chair with 13 disks, place the first disk on the seat so it touches the support fixture. The chair shall not tip over.	Without back	Not applicable
21 Stability Test – Front Stability	A downward force shall be applied initial at 45° to the platform by attaching a strap centered over the front portion of the seat. The force shall be applied until the total unit is transferred to the front support members. The force shall not be less than 40% of the unit weight	/	Pass

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Tests Item	Test method and Requirements	Results-Remark	Rating
22 Tablet Arm Load Ease Test – Cyclic	A 343 N (77 lb.) bag shall be raised until the entire weight is off the tablet surface and then eased (without impact) onto the surface, repeat for a total of 100,000 cycles without loss of serviceability to the unit.	Without tablet arm	Not applicable
23 Tablet Arm Static Load Test	Apply a load of 68 kg (150 lb.) through a 203 mm diameter area 25 mm from the edge of the surface at its apparent weakest point, for one (1) minutes. Shall cause no sudden and major change in the structural integrity of the chair at the first load, and after performing the test, the tablet arm must allow egress form the unit; other losses of serviceability are acceptable.	Without tablet arm	Not applicable

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Sample Photo:

Received sample



SGS authenticate the photo on original report only

End of Report

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