



Test Report

Number: SZHH01084864

Applicant: M.A.D. FURNITURE DESIGN CO. LTD.
14IJ, SHANGBU BUILDING, NANYUAN RD,
FUTIAN DISTRICT, SZ

Date: Aug 26, 2016

Attn: CATTY

Sample Description:

Two (2) pieces of submitted sample said to be :
Item Name : **Sling Bar.**
Item No. : **G42B.**
Country of origin : **China.**



Tests conducted:

As requested by the applicant, refer to attached page(s) for details.

Conclusion:

<u>Tested sample</u>	<u>Standard</u>	<u>Result</u>
submitted samples	ANSI/BIFMA X5.1-2011 General-Purpose Office Chairs - Tests	Pass

Authorized by:
For Intertek Testing Services
Shenzhen Ltd.

Ben N.L. Lin
General Manager



Intertek Testing Services Shenzhen Ltd.- Hardlines

深圳天祥质量技术服务有限公司-轻工产品事业部

301A, 302B, 6/F. 7/F Shekou Technology Main Bldg. and Room 1E of Nanshan Building,
Nanhai Ave., Nanshan District, Shenzhen, China

深圳市南山区南海大道科技大厦 301A、302B、六层、七层、南山大厦 1 楼 1E 房

Tel: (86-755) 2602 0111 Fax: (86-755) 2683 7118/9 Postcode: 518067

www.intertek.com www.intertek.com.cn China Toll-Free:400 886 9926

Attention is drawn to the terms and conditions printed overleaf.

Tests Conducted

1. Office Chairs Tests

Test standard : ANSI/BIFMA X5.1-2011 – General-Purpose Office Chairs – Tests.

Number of sample tested: Three (3) pieces.

The type of the submitted sample: Type III

Initial inspection : No damage was found.

Executive summary:

Clause	Test Method/Requirement			Result
1	Scope			-
2	Definitions			-
3	General			-
4	Types of Chairs			Recorded: Type: III
	 <p>Type I Tilting Chair</p>	 <p>Type II Fixed seat angle, tilting backrest</p>	 <p>Type III Fixed seat angle, fixed backrest</p>	
Section 5 - Back Strength Test-Static - Type I	<p>Test Procedures</p> <p>Functional Load</p> <p>a) A force of 890 N (200 lbf.) shall be applied to the backrest at the backstop position for one (1) minute. If the backrest/tilt lock mechanism will not accept the load due to gradual slipping of the adjustment mechanism during the load application, set the backrest to its most rearward (stopped) position, then apply the specified load(s).</p> <p>b) Remove the load.</p> <p>Proof Load</p> <p>a) A force of 1334 N (300 lbf.) shall be applied to the backrest at the backstop position for one (1) minute. If the backrest/tilt lock mechanism will not accept the load due to gradual slipping of the adjustment mechanism during the load application, set the backrest to its most rearward (stopped) position, then apply the specified load(s).</p> <p>b) Remove the load.</p> <p>Acceptance Level</p> <p>Functional Load</p> <p>There shall be no loss of serviceability to the chair.</p> <p>Proof Load</p> <p>There shall be no sudden and major change in the structural integrity of the chair. Loss of serviceability is acceptable.</p>			NA





Test Report

Number: SZHH01084864

Tests Conducted

Clause	Test Method/Requirement	Result
Section 6 - Back Strength Test-Static - Type II & III	<p>Test Procedures Functional Load a) A force of 667 N (150 lbf.) shall be applied to the backrest at the backstop position for one (1) minute. If the backrest/tilt lock mechanism will not accept the load due to gradual slipping of the adjustment mechanism during the load application, set the backrest to its most rearward (stopped) position, then apply the specified load(s). b) Remove the load.</p> <p>Proof Load a) A force of 1112 N (250 lbf.) shall be applied to the backrest at the backstop position for one (1) minute. If the backrest/tilt lock mechanism will not accept the load due to gradual slipping of the adjustment mechanism during the load application, set the backrest to its most rearward (stopped) position, then apply the specified load(s). b) Remove the load.</p> <p>Acceptance Level Functional Load A functional load applied once shall cause no loss of serviceability to the chair. Proof Load A proof load applied once shall cause no sudden and major change in the structural integrity of the chair. Loss of serviceability is acceptable.</p>	P
Section 7 - Base Test-Static	<p>Test Procedures a) A force of 11,120 N (2500 lbf.) shall be applied for one (1) minute. b) Remove the force. c) Apply a second force of 11,120 N (2500 lbf.) for one (1) minute. d) Remove the load.</p> <p>Acceptance Level There shall be no sudden and major change in the structural integrity of the base. The center column may not touch the test platform during the load applications.</p>	NA





Test Report

Number: SZHH01084864

Tests Conducted

Clause	Test Method/Requirement	Result
Section 8 - Drop Test-Dynamic	<p>Test Procedures</p> <p>Functional Load Test</p> <p>a) A test bag weighing 102 kg (225 lb.) shall be raised 152 mm (6 in.) above the uncompressed seat and released one time.</p> <p>b) Remove the bag.</p> <p>c) For chairs with seat height adjustment features, set height to its lowest position and repeat a) and b).</p> <p>Proof Load Test</p> <p>a) Repeat setup in 8.3 and increase the weight of the test bag to a proof load of 136 kg (300 lb.).</p> <p>b) The test bag shall be raised 152 mm (6 in.) above the uncompressed seat and released one time.</p> <p>c) Remove the bag.</p> <p>d) For chairs with height adjustments, set seat height to its lowest position and repeat a) through c). A second chair may be used for testing the chair in the lowest position</p> <p>Note: If a second chair is used for the proof load test, it must also be subjected to the functional load impact per Section 8.4.1 while in its lowest position.</p> <p>Acceptance Level</p> <p>Functional Load There shall be no loss of serviceability.</p> <p>Proof Load There shall be no sudden and major change in the structural integrity of the chair. Loss of serviceability is acceptable.</p>	P
Section 9 - Swivel Test - Cyclic	<p>Test Procedure</p> <p>A 250 lb (113 kg) load placed on seat, rotated at rate 5-15 rev/min. for 120,000 cycles.</p> <p>For chair with seat height adjustment: 60,000 cycles at the highest position followed by 60,000 cycles at the lowest position.</p> <p>Acceptance Level</p> <p>There shall be no loss of serviceability.</p>	NA
Section 10 - Tilt Mechanism Test - Cyclic	<p>Test Procedure</p> <p>A 225 lb (102 kg) load placed on seat, tested at rate 10-30 cycles /min. for 300,000 cycles to move the mechanism between the front and back stops, without overriding or impacting either stop.</p> <p>Acceptance Level</p> <p>There shall be no loss of serviceability to the tilt mechanism.</p>	NA



Intertek Testing Services Shenzhen Ltd.- Hardlines

深圳天祥质量技术服务有限公司-轻工产品事业部

301A, 302B, 6/F. 7/F Shekou Technology Main Bldg. and Room 1E of Nanshan Building, Nanhai Ave., Nanshan District, Shenzhen, China

深圳市南山区南海大道科技大厦 301A、302B、六层、七层、南山大厦 1 楼 1E 房

Tel: (86-755) 2602 0111 Fax: (86-755) 2683 7118/9 Postcode: 518067

www.intertek.com www.intertek.com.cn China Toll-Free:400 886 9926

Attention is drawn to the terms and conditions printed overleaf.



Test Report

Number: SZHH01084864

Tests Conducted

Clause	Test Method/Requirement	Result
Section 11 - Seating Durability Tests - Cyclic	<p>Test Procedure Impact Test A 125 lb. (57 kg) bag shall free drop on seat from 1.2 in. height, at a rate 10-30 cycles /min. for 100,000 cycles.</p> <p>Front Corner Load-Ease Test Apply 165 lb. (734N) force at one front corner flush to each structural edge, at a rate 10-30 cycles /min. for 20,000 cycles. Repeat the test on the other front corner for additional 20,000 cycles.</p> <p>Acceptance Level There shall be no loss of serviceability to the chair after completion of both the impact and load-ease tests.</p>	P
Section 12 - Stability Tests	<p>Stability Tests – Rear stability - Type III</p> <p>Test Procedure Load the chair with 6 disks, Apply a horizontal force at 6 mm from the top of the disk. For chairs H < 710 mm (28.0 in.), calculate the force as follows: F = 1.1 [47 – H (in)] lbf; For chairs H >= 710 mm (28.0 in.), Apply a fixed force of 93 N (20.9 lbf.).</p> <p>Acceptance level The chair shall not tip over.</p>	P
	<p>Stability Tests – Rear stability - Type I & Type II</p> <p>Test Procedure Load the chair with 13 disks. Note: If the chair does not tip over and the tilt mechanism does not tilt to its most rearward position (i.e., at its tilt stop) when the disks are placed in the chair, the chair shall also be tested according to 12.3.1 with the chair in the unlocked position.</p> <p>Acceptance level The chair shall not tip over.</p>	NA
	<p>Stability Tests –Front stability</p> <p>Test Procedure Apply a vertical load of 600N (135 lb.) at a point 60mm from the front center edge of the load-bearing surface of the seat. Apply a horizontal force of 20N (4.5 lb.) at the same level of the plane of the top of the seat. The force shall be coincident with the side-to-side centerline of the seat.</p> <p>Acceptance Level The chair shall not tip over as the result of the force application.</p>	P





Test Report

Number: SZHH01084864

Tests Conducted

Clause	Test Method/Requirement	Result
Section 13 - Arm Strength Test - Vertical - Static	<p>Test Procedures Functional Load a) A force of 750 N (169 lbf.) shall be applied for one (1) minute. b) Remove the force. Proof Load a) A force of 1125 N (253 lbf.) shall be applied for one (1) minute. b) Remove the force.</p> <p>Acceptance Level Functional Load There shall be no loss of serviceability. For a height adjustable arm, failure to hold its height adjustment position to within 6 mm (0.25 in.) from its original set position as the result of the loading is considered a loss of serviceability. Proof Load There shall be no sudden and major change in the structural integrity of the chair. For a height adjustable arm, a sudden drop in height of greater than 25 mm (1 in.) does not meet this requirement. Loss of serviceability is acceptable.</p>	NA
Section 14 - Arm Strength Test - Horizontal - Static	<p>Test Procedures Functional Load a) A force of 445 N (100 lbf.) shall be applied for one (1) minute in the outward direction. b) Remove the force. Proof Load a) A force of 667 N (150 lbf.) shall be applied for one (1) minute in the outward direction. b) Remove the force.</p> <p>Acceptance Level Functional Load A functional load applied once shall cause no loss of serviceability. Proof Load A proof load applied once shall cause no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable.</p>	NA
Section 15 - Back Durability Test - Cyclic - Type I	<p>Test Procedures A 225lb (102 kg) placed on seat, apply a 100 lbs. (445N) for 120,000 cycles. Rate 10 - 30 cycles per minute.</p> <p>Acceptance Level There shall be no loss of serviceability.</p>	NA
Section 16 - Back Durability Test - Cyclic - Type II and Type III	<p>Test Procedures A 225lb (102 kg) placed on seat, apply a 75 lbs (334N) for 120,000 cycles. Rate 10 - 30 cycles per minute.</p> <p>Acceptance Level There shall be no loss of serviceability.</p>	P





Test Report

Number: SZHH01084864

Tests Conducted

Clause	Test Method/Requirement	Result
Section 17 - Caster/Chair Base Durability Test- Cyclic	<p>Test Procedures Place 250lb (113 kg) on chair or chair base. The sample shall be cycled 2,000 cycles over the obstacles and then 98,000 cycles on a smooth, hard surface without obstacles at a rate 8 - 12 cycles/min.</p> <p>Acceptance Level There shall be no loss of serviceability. Caster Retention Test A 5 lbs. (22N) pull applied to each caster. The caster shall not separate from the base after test.</p>	P
Section 18 - Leg Strength Test - Front and Side Application	<p>Test Procedures Functional load: 75lb (334 N) for 1 min. Proof load: 113 lb (503 N) for 1 min.</p> <p>Side: Functional load: 75 lb (334 N) for 1 min. Proof load: 113 lb (503 N) for 1 min.</p> <p>Acceptance Level The functional load applied in each direction shall cause no loss of serviceability. A proof load applied in each direction shall cause no sudden and major change in the structural integrity of the product. Loss of serviceability is acceptable.</p>	P
Section 19 - Footrest Static Load Test - Vertical	<p>Test Procedures The test only performed chairs seat height >= 610mm (24in.). Functional Load: 445 N (100 lbf.) for 1 min. If the footrest adjustable, maintain F1 and apply an F2 of 445 N (100 lbf.) to the footrest at the opposing position for 1 min. If applicable, remove force F2. Increase F1 to 200 lbf. for 1 min. Proof Load: 1334 N (300 lbf.) for 1 min.</p> <p>Acceptance Level A Functional Load shall be no loss of serviceability or sudden loss of footrest height. A Proof Load applied once shall cause no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable.</p>	P



Intertek Testing Services Shenzhen Ltd.- Hardlines

深圳天祥质量技术服务有限公司-轻工产品事业部

301A, 302B, 6/F. 7/F Shekou Technology Main Bldg. and Room 1E of Nanshan Building,
Nanhai Ave., Nanshan District, Shenzhen, China

深圳市南山区南海大道科技大厦 301A、302B、六层、七层、南山大厦 1 楼 1E 房

Tel: (86-755) 2602 0111 Fax: (86-755) 2683 7118/9 Postcode: 518067

www.intertek.com www.intertek.com.cn China Toll-Free:400 886 9926

Attention is drawn to the terms and conditions printed overleaf.



Test Report

Number: SZHH01084864

Tests Conducted

Clause	Test Method/Requirement	Result
Section 20 - Footrest Durability Test - Vertical - Cyclic	<p>Test Procedures 200 lbs (890N) applied to footrest at a rate 10-30 cycles/min. for 50,000 cycles. If the footrest moves > 25 mm (1 in.) within the first 500 cycles, discontinue testing. If the footrest moves throughout the remainder of the test, reset it to its original position when it is within 12 mm (0.5 in.) from its lowest position.</p> <p>Acceptance Level There shall be no loss of serviceability. Adjustable footrests that move more than 25 mm (1 in.) in the first 500 cycles shall be considered to have lost their serviceability.</p>	P
Section 21 - Arm Durability Test - Cyclic	<p>Test Procedures Apply a force of 400N (90 lb.) to each arm initially at a 10° ± 1° angle at a rate 10 - 30 cycles/min. for 60,000 cycles.</p> <p>Acceptance Level Structural breakage or loss of serviceability shall constitute failure.</p>	NA
Section 22 - Out Stop Test for Chairs with Manually Adjustable Seat Depth	<p>Test Procedures A 163lbs (74 kg) load placed on seat. The seat with the hanging weight 55lbs (25 kg) shall be held at it most rearward position, then released, permitting it to move forward rapidly and impact the out stops. Repeat 25 cycles.</p> <p>Acceptance Level There shall be no loss of serviceability to the unit.</p>	NA
Section 23 - Tablet Arm Static Load Test	<p>Test Procedures Apply a load of 68kg (150 lb.) through a 203mm ± 13mm (8in ± 0.51in) diameter area 25mm (1 in) from the edge of the surface at its apparent weakest point for 1 minutes and remove the load.</p> <p>Acceptance Level The load applied once shall cause no sudden and major change in the structural integrity of the chair. After performing the test, the tablet arm must be allowing egress from the unit; other loss of serviceability is acceptable.</p>	NA





Test Report

Number: SZHH01084864

Tests Conducted

Clause	Test Method/Requirement	Result
Section 24 - Tablet Arm Load Ease Test - Cyclic	<p>Test Procedures The 35kg (77lb) bag shall be raised until the entire weight is off the tablet surface and then eased (without impact) onto the surface, so that it takes the entire weight without any support from the cycling device. Applied a rate 8-20 cycles/min. Repeat 100,000 cycles.</p> <p>Acceptance Level There shall be no loss of serviceability to the unit.</p>	NA

Abbreviation: P = Pass; NA = Not Applicable

End of report

This report is made solely on the basis of your instructions and/or information and materials supplied by you. It is not intended to be a recommendation for any particular course of action. Intertek does not accept a duty of care or any other responsibility to any person other than the Client in respect of this report and only accepts liability to the Client insofar as is expressly contained in the terms and conditions governing Intertek's provision of services to you. Intertek makes no warranties or representations either express or implied with respect to this report save as provided for in those terms and conditions. We have aimed to conduct the review on a diligent and careful basis and we do not accept any liability to you for any loss arising out of or in connection with this report, in contract, tort, by statute or otherwise, except in the event of our gross negligence or wilful misconduct.

