

#### No.SDHL2212101968FT

Date: Feb 06, 2023

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FOSHAN SUNLAND FURNITURE CO., LIMITED NO.3, HUAER ROAD, SHAFU SANLIAN INDUSTRIAL PARK, LONGJIANG TOWN, SHUNDE, FOSHAN, GUANGDONG.

Sample Description	: OFF	ICE CHAIR
Supplier Item No.	: SL-2	2216A
Manufacturer	: FOS	HAN SUNLAND FURNITURE CO., LIMITED
Country of Origin	: CHI	NA

As above test item and its relevant information regarding to the submission are provided and confirmed by the applicant. SGS is not liable to either the test item or its relevant information, in terms of the accuracy, suitability, reliability or/and integrity accordingly.

Sample Receiving Date	: C	Dec 29, 2022
Test Performing Date	: C	Dec 29, 2022 to Feb 06, 2023
Test Performed	: 8	Selected test(s) as requested by applicant

#### **Test Result Summary**

No.	Test(s) Requested	Result(s)	Comments
1	ANSI/BIFMA X5.1-2017 (R2022)	PASS	/
For further details, please refer to the following page(s)			

Signed for and on behalf of SGS-CSTC Standards Technical Services Co., Ltd. Shunde Branch

Maris Leng

Marco Leung Authorized Signatory





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中国・广东・佛山市順德区大良街道办事处五沙顺和南路1号欧洲工业园一号厂房首层邮编: 528333 t (86-757)22805888 f (86-757)22805885 e sgs.china@sgs.com



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## **TESTS AND RESULTS**

# Test Conducted:

ANSI/BIFMA X5.1-2017 (R2022) General-Purpose Office Chairs.

## No. of Sample:

5 pcs of chairs & 2 pcs of bases. For more sample information and pictures, please refer to the following page.

Chair Type:

- Type I. Tilting chair
- Type II. Fixed seat angle, tilting backrest
- Type III. Fixed seat angle, fixed backrest

Test and Requirements	Test Results
5 Backrest Strength Test - Static - Type I and II	
Functional Load	
Force: 667 N (150 lbf.) for one minute.	PASS
Acceptance level: There shall be no loss of serviceability to the chair.	
Proof Load	
Force: 1001 N (225 lbf.) for one minute.	DV66
Acceptance level: There shall be no sudden and major change in the structural integrity	FA55
of the chair. Loss of serviceability is acceptable.	
6 Backrest Strength Test - Static - Type III	
Functional Load	
Force: 667 N (150 lbf.) for one minute.	PASS
Acceptance level: There shall be no loss of serviceability to the chair.	
Proof Load	
Force: 1001 N (225 lbf.) for one minute.	PASS
Acceptance level: There shall be no sudden and major change in the structural integrity	17,000
of the chair. Loss of serviceability is acceptable.	
7 Drop Test – Dynamic	
Functional Load Test	
A test bag weighting 102 kg (225 lb.) shall be raised 152 mm (6 in.) above the	5400
uncompressed seat and released one time (For chairs with seat height adjustment	PASS
features, tested both in highest and lowest position).	
Acceptance level: There shall be no loss of serviceability.	
Proof Load Test	
A test bag weighting 136 kg (300 lb.) shall be raised 152 mm (6 lh.) above the	
uncompressed seal and released one time (For chairs with seal height adjustment	PASS
Teatures, tested both in highest and lowest position).	
Acceptance level. There shall be no sudden and major change in the structural integrity	
Swivel Test - Cyclic	
Load on seat: 122 kg (270 lb )	
$C_{VC}$ and $C_{$	DV66
Bate: Between 5 and 15 rotations per minute	FAUD
Accentance level: There shall be no loss of serviceability	
Acceptance level. There shall be no loss of serviceability.	



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Test and Requirements	Test Results
9 Tilt Mechanism Test – Cyclic	
Load on seat: 109 kg (240 lbs.)	
Cycles: 300,000	PASS
Rate: Between 10 and 30 cycles per minute.	
Acceptance level: There shall be no loss of serviceability to the tilt mechanism.	
10 Seating Durability Tests – Cyclic	
10.3 Impact Test	
Drop weight: 57 kg (125 lb.)	
Drop height: 36 mm (1.4 in.) above the uncompressed surface on the seat	PASS
Cycles: 100,000	1,100
Rate: Between 10 and 30 cycles per minute.	
Acceptance level: There shall be no loss of serviceability to the chair.	
10.4 Front Corner Load-Ease Test – Cyclic – Off-center	
Force: 890 N (200 lbf.)	5400
	PASS
Rate: Between 10 and 30 cycles per minute.	
Acceptance level: There shall be no loss of serviceability to the chair.	
11 Stability Tests	
11.3.1 Rear Stability Test for Type III Chairs	
Load the chair with 6 disks. $\Gamma = 0.4064 (4405 - 10)$ Newton, 11 is the east height in mm.	
• $F = 0.1964 (1195 - H)$ Newton. H is the seat height in mm.	DACC
• $[F = 1, 1, (47 - H)$ pounds force.]. H is the seat height in inches.	PA55
For chairs with seat height equal to or greater than 7 10 mm (28.0 m.), a fixed force of 93	
Accentance level: The chair shall not tin over	
11 3 2 Poar Stability Tost for Typo I and II Chairs	
Load the chair with 13 disks	PASS
Acceptance level: The chair shall not tip over	17,00
11 4 Front Stability	
Load 61 kg (135 lb ) on 60 mm (2.4 in ) from the front center edge and a horizontal	
outward force of 20 N (4.5 lbf.) applied	PASS
Acceptance level: The chair shall not tip over as the result of the force application.	
12 Arm Strength Test - Vertical – Static	
Functional Load	
Force: 750 N (169 lbf.) for one minute.	
Acceptance level: There shall be no loss of serviceability. For a height adjustable arm,	PASS
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	
Force: 1125 N (253 lbf.) for 15 seconds.	
Acceptance level: There shall be no sudden and major change in the structural integrity	PASS
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.	
13 Arm Strength Test - Horizontal – Static	
Functional Load	
Force: 445 N (100 lbf.) for one minute in the outward direction.	PASS
Acceptance level: A functional load applied once shall cause no loss of serviceability.	



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Test and Requirements	Test Results
Proof Load	
Force: 667 N (150 lbf.) for 15 seconds in the outward direction.	DV66
Acceptance level: A proof load applied once shall cause no sudden and major change in	FA00
the structural integrity of the unit. Loss of serviceability is acceptable.	
14 Backrest Durability Test - Cyclic - Type I	
Weight on seat: 109 kg (240 lbs.)	
Load on backrest: 445 N (100 lbf.)	PASS
Cycles: 120,000	1 400
Rate: Between 10 and 30 cycles per minute.	
Acceptance level: There shall be no loss of serviceability.	
15 Backrest Durability Test - Cyclic - Type II and III	
Weight on seat: 109 kg (240 lbs.)	
Load on backrest: 334 N (75 lbf.)	PASS
Cycles: 120,000	17,000
Rate: Between 10 and 30 cycles per minute.	
Acceptance level: There shall be no loss of serviceability.	
16 Caster/Chair Base Durability Test - Cyclic	
16.1 Caster/Chair Base Durability Test for Pedestal Base Chairs	
Load on chair: 122 kg (270 lb.)	
Stroke: 762±50 mm (30±2 in.) of travel	-
Cycles: 2,000 cycles over the obstacles and then 98,000 cycles without obstacles.	PASS
Rate: $10 \pm 2$ cycles per minute	
Acceptance level: There shall be no loss of serviceability. No part of the caster shall	
separate from the chair as a result of the application of the 22 N (5 lbf.) force.	
16.2 Caster/Chair Frame Durability Test for Non-pedestal Chairs with Casters	
Load on chair. 122 kg (270 lb.)	
Stroke: 762±30 mm (30±2 m.) of travel	N1/A
Cycles: 2,000 cycles over the obstacles and then 98,000 cycles without obstacles.	IN/A
Rate: $10 \pm 2$ cycles per minute	
Acceptance level. There shall be no loss of serviceability. No part of the caster shall	
AT Les Strength Test. Erent and Side Application of the 22 N (5 IDI.) lorce.	
17 Leg Strength Test - Front and Side Application	
Tr.s Front Load Test	
Functional Load Test	NI/A
Acceptance level: Functional load(s) shall cause no loss of serviceability	11/7
Proof Load Test	
Force: 503 N (113 lbf.) for one minute	
Acceptance level: Proof load(s) shall cause no sudden and major change in the	N/A
structural integrity of the chair. Loss of serviceability is acceptable	
17.4 Side Load Test	
Functional Load Test	
Force: 334 N (75 lbf.) for one minute.	N/A
Acceptance level: Functional load(s) shall cause no loss of serviceability.	
Proof Load Test	
Force: 503 N (113 lbf.) for one minute.	N1/A
Acceptance level: Proof load(s) shall cause no sudden and major change in the	N/A
structural integrity of the chair. Loss of serviceability is acceptable.	
18 Footrest Static Load Test - Vertical	



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Test and Requirements	Test Results
Functional load test F1: 445 N (100 lbf.) / 890 N (200 lbf.) F2: 445 N (100 lbf.) Time: One minute Acceptance level: There shall be no loss of serviceability or sudden loss of footrest	N/A
Proof load test Load: 1334 N (300 lbf.) for one minute Acceptance level: The load applied once shall cause no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable.	N/A
<b>19 Footrest Durability Test - Vertical – Cyclic</b> Force: 890 N (200 lbf.) Cycles: 50,000 Rate: Between 10 and 30 cycles per minute. 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.	N/A
<b>20 Arm Durability Test – Cyclic</b> Force: 400 N (90 lbf.) to each arm initially at a 10 degrees ± 1 degree angle simultaneously Cycles: 60,000 Rate: Between 10 and 30 cycles per minute. Acceptance level: There shall be no loss of serviceability to the chair.	PASS
<b>21 Out Stop Tests for Chairs with Manually Adjustable Seat Depth</b> Mass on seat: 74 kg (163 lb.) Downward weight: 25 kg (55 lb.) Cycles: 25 Acceptance level: There shall be no loss of serviceability to the unit.	N/A
<b>22 Tablet Arm Chair Static Load Test</b> Load: 68 kg (150 lb.) for one minute 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 allow egress from the unit; other losses of serviceability are acceptable.	N/A
23 Tablet Arm Chair Load Ease Test – Cyclic Load: 25 kg (55 lb.) Cycles: 100,000 Rate: 14 ± 6 cycles per minute. Acceptance level: There shall be no loss of serviceability to the unit.	N/A
24 Structural Durability Test – Cyclic Weight on seat: 109 kg (240 lb.) Horizontal force: 334 N (75 lbf.) Cycles: 25,000 Rate: Between 10 and 30 cycles per minute. Acceptance level: There shall be no loss of serviceability.	N/A



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Test and Requirements	Test Results
Appendix C Base Test – Static A force of 11,120 N (2500 lbf.) shall be applied for one minute. Remove the force. Apply a second force of 11,120 N (2500 lbf.) for one minute. 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.	PASS

#### Remark:

- 1. N/A Not applicable; N/R Not requested; N/P Not provided;
- 2. For the sample information and pictures, please refer to the following page.



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# Sample as Received







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# **Test Pictures with Details**

Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (w=0) stated in ILAC-G8:09/2019.

\*\*\*End of Report\*\*\*

