

## Test Report

No.: AJHL2405001977FT

Date: JUL 12, 2024

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### SUNON TECHNOLOGY CO., LTD

BUILDING 6, NO.1666, ZHIXING ROAD, QIAONAN BLOCK, XIAOSHAN ECONOMIC & TECHNOLOGICAL DEVELOPMENT ZONE, XIAOSHAN ZONE HANGZHOU, ZHEJIANG, CHINA

Sample Description : S11 SOFA  
Client Reference Information : P23-SA004  
P.O. / Ref. No. : SQ202404431  
Manufacturer : SUNON TECHNOLOGY CO., LTD  
Supplier : SUNON TECHNOLOGY CO., LTD

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.

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Sample Receiving Date : MAY 10, 2024  
Sample Resubmission Date : MAY 31, 2024  
Test Performing Date : MAY 10, 2024 to JUL 11, 2024  
Test Performed : Selected test(s) as requested by applicant

### Test Result Summary

No.	Test(s) Requested	Result(s)
1	ANSI/BIFMA X5.4-2020, Clause 5, 6, 7, 8, 9, 10, 11, 12, 15, 16, 17, 21, 24	PASS
For further details, please refer to the following page(s)		

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



David Fan  
Authorized Signatory

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Test Conducted: ANSI/BIFMA X5.4 -2020 Public and Lounge Seating - Tests

### Test Result:

Test Item	Test Requirement	Test Result
Backrest Strength Test - Horizontal -Static (Functional Load) (Clause 5)	Shall cause no loss of serviceability when a force of 667N (150lbf.) is applied to each backrest simultaneously for 1 minute. Apply the force 90°±10° to the backrest at 406 mm (16in.) above the seat.	PASS
Backrest Strength Test - Horizontal -Static (Proof Load) (Clause 5)	Shall cause no sudden and major change in the structural integrity (loss of serviceability is acceptable) when a force of 1112N (250lbf.) is applied to each backrest simultaneously for 10 seconds. Apply the force 90°±10° to the backrest at 406 mm (16in.) above the seat.	PASS
Backrest Strength Test - Vertical -Static (Functional Load) (Clause 6)	Shall cause no loss of serviceability when a force of 890N (200lbf.) is applied vertically at the top of each backrest simultaneously for 1 minute.	PASS
Backrest Strength Test - Vertical -Static (Proof Load) (Clause 6)	Shall cause no sudden and major change in the structural integrity (loss of serviceability is acceptable) when a force of 1334N (300lbf.) is applied vertically at the top of each backrest simultaneously for 10 seconds.	PASS
Backrest Durability Test - Horizontal –Cyclic (Clause 7)	Shall cause no loss of serviceability after a force of 334N (75lbf.) is applied to each backrest simultaneously for 120,000 cycles at a rate between 10 and 30 cycles per minute. Apply the force 90°±10° to the backrest at 406 mm (16in.) above the seat or on the top of backrest with a 109 kg (240 lb.) weight in the center of each seat.	PASS
Backrest Durability Test - Vertical –Cyclic (Clause 8)	Shall cause no loss of serviceability after a vertical downward force of 890N (200lbf.) is applied at the top of the each backrest individually for 10,000 cycles at a rate between 10 and 30 cycles per minute.	PASS
Arm Strength Test Horizontal –Static (Functional Load) (Clause 9)	Shall cause no loss of serviceability when a force is applied horizontally inwards and outwards to the armrest for 1 minute. Distance between arms < 889 mm (35 in.), force: 445 N (100 lbf.); Distance between arms ≥ 889 mm (35 in.), force: 592 N (133 lbf.)	PASS
Arm Strength Test Horizontal - Static (Proof Load) (Clause 9)	Shall cause no sudden and major change in the structural integrity (loss of serviceability is acceptable) when a force of 667N/890N (150lbf. /200 lbf.) is applied horizontally inwards and outwards to the armrest for 10 seconds. Distance between arms < 889 mm (35 in.), force: 667 N (150 lbf.); Distance between arms ≥ 889 mm (35 in.), force: 890 N (200 lbf.)	PASS
Arm Strength Test Vertical - Static (Functional Load) (Clause 10)	Shall cause no loss of serviceability (for a height adjustable arm, failure to hold its height position to within 6 mm (0.25 in.) from its original position is considered a loss of serviceability) when a force is applied vertically to the armrest for 1 minute. Armrest width > 75 mm (3 in.), force: 890 N (200 lbf.) Armrest width ≤ 75 mm (3 in.), force: 750 N (169 lbf.)	PASS



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Test Item	Test Requirement	Test Result
Arm Strength Test Vertical-Static (Proof Load) (Clause 10)	Shall cause no sudden and major change in the structural integrity (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.) when a force is applied vertically to the armrest for 10 seconds. Armrest width > 75 mm (3 in.), force: 1335 N (300 lbf.) Armrest width ≤ 75 mm (3 in.), force: 1125 N (253 lbf.)	PASS
Arm Durability Test for Multiple Seat Units- Horizontal – Cyclic (Clause 11)	Shall cause no loss of serviceability after a horizontal outward force of 445N (100lbf.) is applied to the armrest for 50,000 cycles at a rate between 10 and 30 cycles per minute.	PASS
Arm Durability Test for Multiple Seat Units – Vertical – Cyclic (Clause 12)	Shall cause no loss of serviceability after a vertical downward force of 667N (150lbf.) is applied to the arm for 10,000 cycles at a rate between 10 and 30 cycles per minute.	PASS
Drop Test – Dynamic (Functional Load) (Clause 15)	Shall cause no loss of serviceability when a 102 kg (225lb.) weight free falls once from 152mm (6in.) above the uncompressed seat on each seat position.	PASS
Drop Test Dynamic (Proof Load) (Clause 15)	Shall cause no sudden and major change in the structural integrity (loss of serviceability is acceptable) when a 136 kg (300lb.) weight free falls once from 152mm (6in.) above the uncompressed seat on each seat position.	PASS
Leg Strength Test – Front Load Test (Functional Load) (Clause 16.3)	Shall cause no loss of serviceability when a horizontal force of 334N (75lbf.) is applied inward to each front leg individually for 1 minute.	PASS
Leg Strength Test- Front Load Test (Proof Load) (Clause 16.3)	Shall cause no sudden and major change in the structural integrity (loss of serviceability is acceptable) when a horizontal force of 503N (113lbf.) or a force equal to the weight of the unit, whichever is greater, but not to exceed 667 N (150 lbf.) is applied inward to each front leg individually for 10 seconds.	PASS
Leg Strength Test – Side Load Test (Functional Load) (Clause 16.4)	Shall cause no loss of serviceability when a horizontal force of 334N (75lbf.) is applied inward to side of a front and rear leg individually for 1 minute.	PASS
Leg Strength Test- Side Load Test (Proof Load) (Clause 16.4)	Shall cause no sudden and major change in the structural integrity (loss of serviceability is acceptable) when a horizontal force of 503N (113lbf.) or a force equal to the weight of the unit, whichever is greater, but not to exceed 667 N (150 lbf.) is applied inward to side of a front and rear leg individually for 10 seconds.	PASS
Unit Drop Test – Dynamic (Clause 17)	Shall cause no loss of serviceability after lifting one end of the unit to a specified height per Table 2 or to the balance point whichever comes first and allow it to drop freely. Repeat the test on the opposite end of the unit.	PASS



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Test Item	Test Requirement	Test Result
Rear Stability for Non-tilting Units (Clause 21.3)	Load the seat with 6 disks against the support fixture. Apply a horizontal force to the highest disk at 6 mm (0.25 in.) from the top of the disk. The application of the force shall not cause the unit to tip over. Determine the horizontal force: $H \geq 710\text{mm}$ , $F = 93\text{N}$ ; $H < 710\text{ mm}$ , $F = 0.1964 (1195-H)$ where: H is the seat height measured at the front of the bottom of the lowest disk when all disks are in the chair, in mm	PASS
Rear Stability Test for Tilting Units (Clause 21.4)	Load one seat position with 13 disks against the support fixture. The unit shall not tip over.	NA
Front Stability for Units Less than 36.3 kg (80 lbs.) (Clause 21.5)	Apply a vertical load of 600 N (135 lbf.) at a point 60 mm (2.4 in.) from the front center edge of the load-bearing surface of the seat. Apply a horizontal force of 20 N (4.5 lbf.) at the same height. The force shall be coincident (in-line) with the side-to-side centerline of the seat. The chair shall not tip over as the result of the force application(s).	NA
Front Stability for Units Greater Than or Equal to 36.3 kg (80 lbs.) (Clause 21.6)	Apply a 142 N (32 lbf.) downward force initially at $45^\circ \pm 5^\circ$ to the test platform by a strap centered over the front portion of the seat. The chair shall not tip over as the result of the force application.	PASS
Structural Durability Test – Side-to-Side - Cyclic (Clause 24)	There shall be no loss of serviceability after applying a force of 334 N (75 lbf.) to the unit frame midway between front and rear of the seat at the height of the seat for 25000 cycles with a 109 kg (240 lb.) on the center of the seat. One cycle shall consist of one outward and one inward force application.	PASS

### Remark:

1. NA = Not applicable
2. The results show in this test report refer only to the sample(s) tested.
3. This declaration of conformity is only based on the result of this laboratory activity, the impact of the uncertainty of the results was not included.



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### Sample Information

Overall dimension: 820 mm (L)×2660 mm (W)×830 mm (H)

Weight: 78.40 kg

### Photo Appendix



Sample as received - View 1



Sample as received - View 2



Sample as received - View 3



Sample as received - View 4

SGS authenticate the photo on original report only

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