

S.P.RICHARDS CO.

6300 HIGHLANDS PKWY, SMYRNA, GA 30082

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

Sample Description : OFFICE CHAIR
Style / Item No. : LLR62624
Buyer : S.P.RICHARDS COMPANY
Country of Origin : CHINA
Country of Destination : US
Test Requested : ANSI/BIFMA X5.1-2011 GENERAL-PURPOSE OFFICE CHAIRS-TESTS,
MEDIFIED AS BIG & TALL CHAIR USE (CAPACITY TO 350lb)
Sample Receiving Date : SEP.30, 2011
Sample Resubmission Date : MAR.14, 2012
Test Performing Date : SEP.30, 2011 TO MAR.23, 2012
Test Result(s) : FOR FURTHER DETAILS, PLEASE REFER TO THE FOLLOWING PAGE(S)

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

David Fan
Engineer

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Test Conducted: ANSI/BIFMA X5.1 -2011 (MEDIFIED AS BIG & TALL CHAIR USE (CAPACITY TO 350lb))

Test Item	Citation/ Method	Criteria	Results
Arm (with / without arm)	CPSD-HL-01057-MTHD	Shall conform to claimed feature	PASS
Base (caster / non-caster)	CPSD-HL-01057-MTHD	Shall conform to claimed feature	PASS
Seat Plate Type	CPSD-HL-01057-MTHD	Verify approved seat plate type is being used. Must have doughnut-shaped cylinder type gas lift receiver. Include with report a photo of the seat plate submitted with sample. (Refer to photo at end of protocol for example of seat plate.) Report conform / not conform; do not rate.	PASS
PERFORMANCE			
NOTE: Testing modified for user capacity up to 350 pounds.			
NOTE: On any failure, annotate the exact failure point For cycling tests, report the approximate cycle of failure or the cycle range in which the failure occurred.			
Effects of Extreme Temperature (environmental)	CPSD-HL-01012-MTHD	24 hours @ 0 °F and 120 °F - No failure or visual change Prior to assembly place chair parts (arms, legs, etc) into chamber. Note which parts if any do not fit	PASS
Effect of Humidity	CPSD-HL-01007-MTHD	No adverse effects (95% RH & 100 °F 24 hours) Prior to assembly place chair parts (arms, legs, etc) into chamber. Note which parts if any do not fit	PASS
Back Strength Static (functional load) (Type I chairs)	BIFMA X5.1 Clause 5.4.1 (Mod.)	No structural breakage or loss of serviceability when 320 lb (1420 N) is applied for 1 min. Applied to 90° from back at 16 in above the seat. If the back is less than 16 in, the load is applied at the top of the back.	PASS
Back Strength Static (proof load) (Type I chairs)	BIFMA X5.1 Clause 5.4.2 (Mod.)	No sudden and major change in the structural integrity (loss of serviceability is acceptable) when 465 lb (2068 N) is applied for 1 min. Applied to 90° from back at 16 in above the seat. If the back is less than 16 in, the load is applied at the top of the back.	PASS

To be continued....

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Test Item	Citation/ Method	Criteria	Results
Back Strength Static (functional load) (Type II chairs – non-tilt or adjustable seat – tilt back.)	BIFMA X5.1 Clause 6.4.1 (Mod.)	No structural breakage or loss of serviceability when 240 lb (1070 N) is applied for 1 min. Applied to 90° from back at 16 in above the seat. If the back is less than 16 in, the load is applied at the top of the back.	NA
Back Strength Static (proof load) (Type II chairs – non-tilt or adjustable seat – tilt back.)	BIFMA X5.1 Clause 6.4.2 (Mod.)	No sudden and major change in the structural integrity (loss of serviceability is acceptable) when 400 lb (1780 N) is applied for 1 min. Applied to 90° from back at 16 in above the seat. If the back is less than 16 in, the load is applied at the top of the back.	NA
Back Strength Static (functional load) (Type III chairs – non-tilt or adjustable seat – fixed, flex, or manually adjustable back.)	BIFMA X5.1 Clause 6.4.1 (Mod.)	No structural breakage or loss of serviceability when 240 lb (1070 N) is applied for 1 min. Applied to 90° from back at 16 in above the seat. If the back is less than 16 in, the load is applied at the top of the back.	PASS
Back Strength Static (proof load) (Type III chairs – non-tilt or adjustable seat – fixed, flex, or manually adjustable back.)	BIFMA X5.1 Clause 6.4.2 (Mod.)	No sudden and major change in the structural integrity (loss of serviceability is acceptable) when 400 lb (1780 N) is applied for 1 min. Applied to 90° from back at 16 in above the seat. If the back is less than 16 in, the load is applied at the top of the back.	PASS
Front Seating Capability	CPSD-HL-01022-MTHD (Mod.)	No failure under 465 lb loading at edge (6 in)	PASS
Base Test Static (pedestal base)	BIFMA X5.1 Clause 7	No sudden and major change in the structural integrity under 2500 lb (11,100 N) compression for 1 min. The weight is then removed and reapplied for 1 min. The center column may not touch the test platform during load applications.	PASS
Drop Test Dynamic (functional load)	BIFMA X5.1 Clause 8.4.1 (Mod.)	No structural breakage or loss of serviceability when 350 lb free falls from 6 in height to the center of the seat.	PASS
Drop Test Dynamic (proof load)	BIFMA X5.1 Clause 8.4.2 (Mod.)	No sudden and major change in the structural integrity (loss of serviceability is acceptable) when 465 lb free falls from 6 in height to the center of the seat.	PASS

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Test Item	Citation/ Method	Criteria	Results
Swivel Test - Cyclic	BIFMA X5.1 Clause 9 (Mod.)	No structural breakage or loss of serviceability after 60,000 cycles of rotation (360°) under a 350 lb load on the seat at maximum height, seat shall then withstand another 60,000 cycles of rotation at its lowest seating position. Note: all chairs must withstand 120,000 cycles	PASS
Tilt Mechanism Test – Cyclic (Type I & II chairs)	BIFMA X5.1 Clause 10 (Mod.)	No structural breakage or loss of serviceability in 300,000 cycles under a 350 lb load to the center of the seat.	PASS
Seating Durability Test – Cyclic	BIFMA X5.1 Clause 11.3 (Mod.)	No structural breakage or loss of serviceability in 100,000 cycles 1 in above the resting point on the seat with a 200 lb load in the seat	PASS
Front Corner Load Ease Test – Cyclic Off Center	BIFMA X5.1 Clause 11.4 (Mod.)	No structural breakage or loss of serviceability after 20,000 cycles to both front seat corners from a 265 lb load positioned flush to both outer edges applied without impact for a total of 40,000 cycles	PASS
Stability Test Dynamic – Rear Stability	BIFMA X5.1 Clause 12.3	A 173 lb weight is placed to the seat center (strapped: Fig. 12a), tipping force is measured as pulled rearward against a ½ in. obstruction to the chair casters or feet. The load is applied until the total weight is transferred to the rear support members. The tipping force shall not be less than: Type I and II – 20 lb (89 N) Type III – 35 lb (156 N)	PASS
Stability Test Dynamic – Front Stability	BIFMA X5.1 Clause 12.4	The chair is obstructed with a ½ in obstruction to the chair casters or feet. A downward load of 135 lb is centered 2.4 in from the seat front center edge. The seat shall withstand 4.5 lbf horizontally from the front seat edge without tipping	PASS
Arm Strength Test (vertical-static) (functional load)	BIFMA X5.1 Clause 13.4.1 (Mod.)	No structural breakage or loss of serviceability when 266 lb (1183 N) is applied for 1 minute. The vertical load is uniformly applied through a 5 in area at the apparent weakest point.	PASS

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Test Item	Citation/ Method	Criteria	Results
Arm Strength Test (vertical-static) (proof load)	BIFMA X5.1 Clause 13.4.2 (Mod.)	No sudden and major change in the structural integrity (loss of serviceability is acceptable) when 465 lb (2068 N) for 1 minute is applied. The vertical load is uniformly applied through a 5 in area at the apparent weakest point.	PASS
Arm Strength Test (horizontal-static) (functional load)	BIFMA X5.1 Clause 14.4.1 (Mod.)	No structural breakage or loss of serviceability when 160 lb (712 N) is applied for 1 minute horizontally outward to the arm rest at the apparent weakest point of the arm rest.	PASS
Arm Strength Test (horizontal-static) (proof load)	BIFMA X5.1 Clause 14.4.2 (Mod.)	No sudden and major change in the structural integrity (loss of serviceability is acceptable) when 240 lb (1070 N) is applied for 1 minute horizontally outward to the arm rest at the apparent weakest point of the arm rest.	PASS
*Backrest Durability Test – Cyclic (Type I)	BIFMA X5.1 Clause 15 (Mod.)	No structural breakage or loss of serviceability in 120,000 cycles with 350 lb (158 kg) in the center of the seat and a force of 160 lbf (712 N) to the chair back applied at a 90° to the plane of the back. For chairs with a back width greater than 16 in at the height of loading perform 80,000 cycles. Reposition the load to the right and apply for 20,000 cycles, then reposition the load to the left and apply for 20,000 cycles. If using a cable pulley system apply the load for 20,000 cycles, 30 in minimum from the attachment point to the pulley. (For chairs with tilt mechanisms that lock see Sect. 4 for classification change.)	PASS

To be continued....

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Test Item	Citation/ Method	Criteria	Results
Backrest Durability Test – Cyclic (Type II & III)	BIFMA X5.1 Clause 16 (Mod.)	No structural breakage or loss of serviceability in 120,000 cycles with 350 lb (1560 kg) in the center of the seat and a force of 120 lb (534 N) to the chair back applied at a 90° to the plane of the back. For chairs with a back width greater than 16 in at the height of loading perform 80,000 cycles. 1 Reposition the load to the right and apply for 20,000 cycles, then reposition the load to the left and apply for 20,000 cycles. If using a cable pulley system apply the load for 20,000 cycles, 30 in minimum from the attachment point to the pulley.	PASS
Caster/Chair Base Durability – Cyclic (pedestal base chairs)	BIFMA X5.1 Clause 17.1.4 (Mod.)	No structural failure or loss of service after 2,000 cycles over a hard surface with 3 obstacles and 98, 000 cycles over a smooth hard surface without obstacles (30 in forward / backward stroke minimum) under a 350 lb load in the seat. After completion of the cycling, apply a 5 lb force to each caster, in line with the caster stem. The caster should not separate.	PASS
Caster/Chair Base Durability – Cyclic (chairs with legs)	BIFMA X5.1 Clause 17.2.4 (Mod.)	No structural failure or loss of service after 2,000 cycles over a hard surface with 2 obstacles and 98, 000 cycles over a smooth hard surface without obstacles (30 in forward / backward stroke minimum) under a 350 lb load in the seat. After completion of the cycling, apply a 5 lb force to each caster, in line with the caster stem. The caster should not separate.	NA
Leg Strength Test-Front Load (functional load) (chairs without pedestal bases)	BIFMA X5.1 Clause 18.3.2.1 (Mod.)	No loss of serviceability when a force of 120 lb (534 N) is applied to each front leg individually for a period of 1 minute.	NA

To be continued....

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Test Item	Citation/ Method	Criteria	Results
Leg Strength Test-Front Load (proof load) (chairs without pedestal bases)	BIFMA X5.1 Clause 18.3.2.2 (Mod.)	No sudden and major change in the structural integrity of the chair shall occur (loss of serviceability is acceptable) when a force of 200 lb (890 N) is applied to each front leg individually for a period of 1 minute.	NA
Leg Strength Test-Side Load (functional load) (chairs without pedestal bases)	BIFMA X5.1 Clause 18.4.2.1 (Mod.)	No loss of serviceability when a force of 120 lb (534 N) is applied once to the front and rear leg individually for a period of 1 minute.	NA
Leg Strength Test-Side Load (proof load) (chairs without pedestal bases)	BIFMA X5.1 Clause 18.4.2.2 (Mod.)	No sudden and major change in the structural integrity of the chair shall occur (loss of serviceability is acceptable) when a force of 185 lb (823 N) is applied once to the front and rear leg individually for a period of 1 minute.	NA
Arm Durability Test - Cyclic	BIFMA X5.1 Clause 20 (Mod.)	No structural breakage or loss of serviceability when a force of 120 lb (534 N) is applied to each arm at a 10° angle ± 1° for 60,000 cycles.	PASS
Tilt Tension Adjustment Setting	CPSD-HL-01058-MTHD	Verify tilt tension adjustment setting. Record number of complete turns of tilt tension knob from maximum tension to minimum tension.	PASS
Headrest Cycle Test	CPSD-HL-01058-MTHD	No Damage - 100 Repeated Up / Down Cycles	NA
*Ease of Assembly	CPSD-HL-03027-MTHD	Shall provide ease of assembly and shall be accurate	NP
Instruction Layout	CPSD-HL-01058-MTHD	Shall be easy to follow	NP
Comfortability (Seat)	CPSD-HL-01058-MTHD	Shall be comfortable	PASS

Remark: NA---not applicable, NP---Not provided

To be continued...

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Sample Photo:



End of Report

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