

Test Report

No.: SDHG1412020547FT

Date: Dec.17, 2014

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COMFORT SEATING EUROPE
RIVERBANK MILL, 1 STONEYGATE ROAD, NEWMILNS, AYRSHIRE,
KA16 9BN, SCOTLAND, THE UNITED KINGDOM

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

Sample Description : SKATE TRAINING CHAIR
Style / Item No. : SKEP-B-LAM-H-PW-FS-ECS
Manufacturer : COMFORT OFFICE FURNITURE CO., LTD
Sample Receiving Date : Dec.08, 2014
Test Performing Date : Dec.08, 2014 to Dec.17, 2014

Test Result Summary

Test(s) Requested	Result(s)
BS EN 1729-2:2012 (Size 4 ~ 7)	PASS

Summary:

1. For further details, please refer to the following page(s).

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



Bill Wang
Approved signatory



SGS-CSTC Standards Technical Services Co., Ltd.
Guangzhou Branch: Guangzhou Customs Special Zone Harbors Laboratory

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TESTS AND RESULTS
Test Conducted:

BS EN 1729-2:2012 Safety requirements and test methods for chairs and tables for educational institutions.

General Test Condition:

The following test program was conducted in a laboratory environment maintained at 15°C to 25°C and 50%±5 RH. The sample was individually tested after conditioning in the test environment for at least 24 hours prior to conducting the test.

The complete detailed procedures may be found in the referenced specification and are only summarized herein. Unless otherwise specified, the tests are carried out in the following order on the same sample.

No. of Sample:

1 piece (Sample 1). For more sample information and pictures, please refer to the following page.

Size Marks: Size 4 ~ 7.

Test	Test Description and Requirements	Test Results
4 Safety requirements		
In order to minimise the risk of personal injury or damage to clothing, the following requirements apply.		
a	Edges of the seat, back rest and arm rests, which are in contact with the user when sitting in the chair shall be rounded with a minimum 2 mm radius or chamfer;	PASS
b	Edges of the handles shall be rounded with a minimum 2 mm radius in the direction of the force applied;	/ Not applicable
c	All other edges and corners with which the user may come into contact with during normal use shall be smooth, rounded or chamfered and shall have no burrs;	PASS
d	Distance between accessible moving parts operated by powered mechanisms, e.g. gas lifts, shall always be either < 8 mm or ≥ 25 mm;	/ Not applicable
e	With the exception of setting up or folding tables and chairs, there shall be no accessible gaps > 8 mm and < 25 mm created during normal movements and actions;	PASS
f	Adjustment controls shall not operate inadvertently or accidentally;	/ Not applicable
g	Open ends and feet of tubular components shall be capped or otherwise closed;	/ Not applicable
h	Parts shall not be detachable without the use of an appropriate tool;	PASS
i	Parts which are lubricated shall be covered in order to avoid staining;	/ Not applicable
j	The finish of the work surface shall not exceed silky matt (corresponding to 45 gloss units or to a 60° reflectometer value of less than 20) to minimise specular reflections in accordance with EN 13722 at 60°;	PASS
k	Chairs shall not overturn when tested as specified in 5.2;	PASS
l	Chairs shall show no structural failure which can affect safety when tested for strength and durability as specified in 5.3 and they shall still fulfil their function. For overload tests there shall be no visible fracture or breakage;	PASS



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Test	Test Description and Requirements	Test Results
m	Tables shall not overturn when tested in accordance with EN 1730:2000, 6.7;	/ Not applicable
n	Tables shall show no structural failure which can affect safety when tested for strength and durability as specified in 6.2 and they shall still fulfil its function.	/ Not applicable
5 Testing of chairs When references are made to EN 1022 or EN 1728, the method of determining the seat and back loading points specified is not always suitable for educational seating. For the purpose of this European Standard, the seat loading point shall be measured forward of the point S (EN 1729-1) and the back loading point shall be measured upwards from a point on the seat vertically below point S.		
5.2	Stability The stability of chairs shall be tested according to EN 1022:2005 but using the loads and forces specified in 5.2.2, 5.2.3, 5.2.4 and 5.2.5; and the loading points as defined in Table 1. Both the practical and the calculative method may be applied.	
5.2.2	Forward stability (EN 1022:2005, 6.2) Apply a force $F_v = 600\text{N}$ (size mark 7)/ 500N (size mark 4) vertically (for multiple sitting places to a maximum of 2 places) by means of the loading pad acting at those points 60 mm behind the front edge of the load bearing structure most likely to result in overturning. At each loaded position apply a force $F_H = 20\text{N}$ for at least 5 s horizontally outwards along a horizontal line extended forward from the point where the base of the loading pad meets the upper surface of the seat.	PASS
5.2.3.1	Sideways stability of chairs without armrests (EN 1022:2005, 6.4) Apply a force $F_v = 600\text{N}$ (size mark 7)/ 500N (size mark 4) vertically by means of the loading pad at those points 60 mm behind the edge of the load bearing structure of the side nearest the stopped feet most likely to result in overturning. Apply a sideways force $F_H = 20\text{N}$ horizontally outwards for at least 5 s along a line from the point where the base of the loading pad meets the upper surface of the seat.	/ Not applicable
5.2.3.2	Sideways stability of chairs with armrests (EN 1022:2005, 6.5) Apply a vertical force $F_1 = 350\text{N}$ (size mark 7)/ 300N (size mark 4) by means of the loading pad at a position on the centre line of the arm up to a maximum 40 mm inwards from the outer edge of the arm structure at the most adverse position along its length. Apply a vertical force $F_2 = 250\text{N}$ (size mark 7)/ 200N (size mark 4) at a point 100mm(size mark 7)/85mm(size mark 4) to the side of the fore and aft centre line of the seat which is nearest the stopped feet and at the same distance from the backrest as the arm loads. Apply a horizontal force $F_H = 20\text{N}$ outwards, and perpendicular to the line joining the stopped feet, for at least 5 s, at the upper surface of the armrest in line with the vertical arm force and on the side with stopped feet.	PASS

Test	Test Description and Requirements	Test Results
5.2.4	Rearwards stability (EN 1022:2005, 6.6) This sub-clause only applies to seating with backs extending 50 mm or more above the unloaded seat. All adjustable backs shall be set in their most upright position. Apply a vertical force $F_v = 600\text{N}(\text{size mark 7})/500\text{N}(\text{size mark 4})$ to the seat by means of the loading pad at the seat loading point. Apply the force $180\text{N}(\text{size mark 7})/130\text{N}(\text{size mark 4})$ horizontally for at least 5 s in a rearward direction to the back of the seating at the point or at the top edge of the back rest, whichever is the lower. When the seating has more than one sitting place, carry out the procedure on two most adverse sitting places simultaneously.	PASS
5.2.5	Chairs with backrest inclination (EN 1335-3:2009, 7.1.7) Load the chair with discs so that the discs are firmly settled against the back rest. If the height of the stack of discs exceeds the height of the back rest, prevent the upper discs from sliding off by the use of a light support. Seat load: 13 pieces of discs(size mark 7)/11 pieces of discs(size mark 4)	/ Not applicable
5.3	Strength and durability With the exception of the drop test, which shall be tested according to Annex A, the strength and durability of the chairs shall be tested in accordance with EN 1728 using the loads and cycles specified below.	
5.3.2	Seat and back static load (EN 1728:2000, 6.2.1) Apply the downward force 2000 N at the seat loading position. With the downward force maintained, apply the back force max 700 N at back loading position. Remove the back load and then the seat load. Repeat above operation for 10 cycles.	PASS
5.3.3	Seat and back durability (EN 1728:2000, 6.7) Apply the downward force 1250 N at the seat loading position. With the downward force maintained, apply the back force 300 N at back loading position. Remove the back load and then the seat load. Repeat above operation for 100000 cycles.	PASS
5.3.4	Seat front edge durability (EN 1728:2000, 6.8) Apply the vertical forces 800 N alternately on two points each 80mm from the front edge of the seat structure and as near as possible to either side of the seat but not less than 80mm from the edges. Repeat above operation for 50000 cycles.	PASS
5.3.5	Sideways static load (EN 1728:2000, 6.13) Applicable to chairs and stools with legs or pedestals, except for chairs with swivel actions. Prevent the chair from movement by stops against one front and one rear legs. Apply the seat load 1600 N at any position not more than 150mm from the unload edge of the seat. Apply the horizontal force max. 600 N centrally to the side towards the restrained leg. Repeat above operation for 10 times.	PASS

Test	Test Description and Requirements	Test Results
5.3.6	Forward static load (EN 1728:2000, 6.12) Applicable to chairs and stools with legs or pedestals, except for chairs with swivel actions. Prevent the chair form movement by stops against the front leg. Apply the seat load 1600 N at the seat loading position. Apply the horizontal force max. 600 N centrally at the rear of the seat in a forward direction. Repeat above operation for 10 times.	PASS
5.3.7	Seat impact (EN 1728:2000, 6.15) Place one layer of foam on the seat. Determine the height of fall from the position of the impactor when it is resting on the surface of that layer of foam. Place a second layer of foam between the striking surface and the chair seat for the tests. Allow the seat impactor (25 kg) to fall freely from the height $H = 300$ mm onto the seat loading position. Repeat above operation for 10 times. Repeat also at any other position considered likely to cause failure. For articles with more than one seating position apply the test to one end seat and an intermediate seating position.	PASS
5.3.8	Back impact (EN 1728:2000, 6.16) This test is for all seating not tested in accordance with Backwards Fall Test. Prevent the chair form movement by stops against the front leg. Allow the impact hammer (8.5 kg) to fall freely from the height $H = 620$ mm onto the center of the top outside of the chair back for 10 times.	PASS
5.3.9	Static load of foot rail (EN 1728:2000, 6.4) Not apply to seat height $H < 600$ mm. Apply the downward force $F_v = 1300$ N to the seat at seat loading position for 10 times.	/ Not applicable
5.3.10	Drop test (Annex A) Support the chair so that, at impact on one leg, the line joining that leg to the leg diagonally opposite is inclined $10 \pm 2^\circ$ to the horizontal. Lift the chair to 600 mm height and drop it for 5 times. The test shall be carried out on one front leg and one rear leg.	/ Not applicable
5.3.11	Foot rail durability (EN 15373:2007, A.5 – General) Apply the downwards vertical force 1000 N to the foot rest at the point most likely to cause failure but not less than 80 mm from the front edge using the local loading pad (EN 1728:2000, clause 5.8) for 50000 cycles. Maintain the force for (2 ± 1) s. For round cross-section ring shaped foot rests, the force shall be applied through the centre of the ring cross section.	/ Not applicable
5.3.12	Armrest vertical static load (EN 1728:2000, 6.6) Apply the vertical force $F_v = 600$ N at the points along one arm most likely to cause failure, but not less than 100 mm from either end of the arm structure for 10 times. Overload: 900 N Loading pad: $D = 200$ mm or 100mm	PASS
6 Testing of tables		
6.1	Stability Unless otherwise specified, the stability of tables shall be tested according to EN 1730 and EN 1728 as specified below.	

Test	Test Description and Requirements	Test Results
6.1.2	Stability of tables, vertical load (EN 1730:2000, 6.7) All tables shall be tested in accordance with EN 1730:2000, 6.7, with a distance of 50 mm from the edge to the loading point and a vertical force of 600 N.	/ Not applicable
6.2	Strength and durability of tables Unless otherwise specified, the strength and durability of tables shall be tested in accordance with EN 1730.	
6.2.2	Horizontal static load (EN 1730:2000, 6.2) Apply the horizontal force of 400 N using two loading pads 100 mm in diameter alternately at the center of each short side of the table for 10 times. Repeat above operation for the long side of the table. Check the table for any damage.	/ Not applicable
6.2.3	Horizontal durability (EN 1730:2000, 6.4) Place a mass of 50 kg on the geometric center of the table top. Apply two horizontal forces of 300 N using the loading pads 100 mm in diameter alternately at the top surface of the table for 10000 cycles. One force is at one end of the table 50 mm from the corner and the other at the opposite end. Repeat above operation at the other corners. Check the table for any damage.	/ Not applicable
6.2.4	Vertical static load (EN 1730:2000, 6.3) Apply the vertical force of 1000N using the loading pads 100 mm in diameter on the top of the table at any position that is not less than 100 mm from any edge for 10 times. If the table has ancillary working surface, apply the vertical force of 200 N on the top of the ancillary working surface at any position that is not less than 100 mm from any edge for 10 times. Check the table for any damage.	/ Not applicable
6.2.5	Vertical durability (EN 1730:2000, 6.5) Apply the vertical force of 600 N using the loading pads 100 mm in diameter on the top of the table at any position that is not less than 100mm from any edge. Repeat above operation for 10000 times. Check the table for any damage.	/ Not applicable

Remark:

- The original test report Reference No. SDHG1411019638FT, issued date: Dec.17, 2014, was modified on Dec.17, 2014 according to original applicant's requirements. Following changes are included:
 - Change of applicant's name.
 - Change of applicant's address.

SAMPLE INFORMATION AND PICTURES

Weight: 17.35kg

Overall Dimensions: 635mm L x 800mm W x 925mm H

Other Dimensions: /

Sample as Received



View 1



View 2



View 3



View 4

