Test Report

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

Sample Description
Supplier Item No.
: ANDICO OFFICE CHAIR
: ZM-411B-2

| Manufacturer | $:$ FOSHAN ZHONG MENG SHENG YE FURNITURE CO., LTD |
| :--- | :--- |
| Supplier | $:$ FOSHAN ZHONG MENG SHENG YE FURNITURE CO., LTD |
| Country of Destination | $:$ UNITED KINGDOM |
| Sample Receiving Date | $:$ Jul.01, 2019 |
| Test Performing Date | $:$ Jul.04, 2019 to Aug.01, 2019 |

Test Result Summary

| Test(s) Requested | Result(s) |
| :--- | :--- |
| Partial tests of EN 1335-2:2018 | PASS |

## Summary:

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

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


Bill Wang
Approved signatory


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## TESTS AND RESULTS

## Test Conducted:

Partial tests of EN 1335-2:2018

## No. of Sample:

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

## Test and Requirements

## Test Results

### 4.4 Stability tests and requirements

When tested according to Table 1, the seating shall not overturn.

## EN 1022: 2018, 7.3.3 Corner stability test

This test is only applicable on seating where it is possible to apply the stability loading pad at the specified position. Where features such as arms prevent the loading pad from being applied at the specified position, the test is not applicable.
Position the seating on the floor surface with two adjacent supporting points on the front, or base restrained by stops.
The loading point shall be defined as the point 60 mm from the edge of the load bearing structure on a line that passes through the seat loading point and the PASS intersection of lines parallel to the transverse and median planes, projected from the most forward point of the load bearing structure and the side edges of the load bearing structure of the seat at the widest point on the seat at, or in front of, the transverse plane.
For seating with a single seat apply a force of 300 N vertically by means of the loading pad acting at the loading point X . For seating with multiple seats apply a force of 300 N at the loading point $X$ on one outside seating position.

## EN 1022: 2018, 7.3.1 Forwards overbalancing, all seating

Position the seating on the floor surface with two adjacent supporting points on the front or base restrained by stops.
Apply a force of 600 N vertically (for multiple sitting places to a maximum of 2 places, simultaneously) 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 of 20 N for at least 5 s horizontally outwards along a horizontal line extended forward from the point where the base of the loading PASS pad meets the upper surface of the seat.
For items of seating with a leg rest attached to the structure of the item, and where the leg rest is designed to support the weight of the user, the test procedure shall be repeated with the leg rest fully extended and the force of 600 N vertically by means of the loading pad acting at the point on the centre line of the leg rest 60 mm behind the front edge of the load bearing structure.
For items of seating with a leg rest not designed to support the weight of the user the test is not applicable to the leg rest.


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## Test and Requirements

EN 1022: 2018, 7.3.5 Sideways overturning, all other seating

### 7.3.5.1 General

This test is applicable to all seating with arms, or where the top edge of the seat on the transverse plane is more than 50 mm above the height of the seat loading point (A).

### 7.3.5.2 Seating with arm rests

Position the seating on the floor surface with two adjacent supporting points on one side, or base restrained by stops.
Apply a force of 250 N vertically by means of any suitable device, at a point 100 mm to the side of the fore and aft centre line of the seat which is nearest the stopped feet and on the transverse plane.
Apply a force of 350 N vertically by any suitable device, at a position on the centre line PASS of the arm up to a maximum 40 mm inwards from the outside edge of the arm structure at the intersection of the arm rest and the transverse plane, but not less than 40 mm from the front or rear edge of the arm structure.
If the transverse plane does not intersect with the arm rest, apply the force of 350 N 40 mm from the point at the front or rear of the arm rest structure that is nearest the transverse plane.
Apply a horizontal force of 20 N outwards, and perpendicular to the line joining the stopped feet, for at least 5 s , at the upper surface of the seat or arm rest in line with the vertical force of 350 N and on the side with stopped feet.

## EN 1022: 2018, 7.3.6 Rearwards overturning all seating with back rests

The test is not applicable to seating that has adjustable back rest inclination that cannot be locked in position.
For seating that has an adjustable back rest inclination that can be locked in position, it shall be locked in the most upright position. When an independent lumbar adjustment is fitted it shall be set in the most adverse configuration.
Position the seating on the floor surface with the rear legs, two adjacent supporting points on the back, or base restrained by stops.
Apply a vertical force of 600 N to the seat by means of the loading pad at the seat loading point (A).
Apply the force $F_{2}$ horizontally in a rearward direction to the back of the seating at the back loading point, $B$, 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.
If the back rest pad is pivoting around a horizontal axis above the height of the seat and is free to move, the horizontal force shall be applied on the axis. If the back rest is height adjustable, the axis shall be set as close as possible to 300 mm above the seat loading point (A).
EN 1022: 2018, 7.4.2 Tilting chairs
The test method applies to all values of $\theta \geq 10^{\circ}$ and values of $\gamma$ between $90^{\circ}$ and $170^{\circ}$. If the seating has a locking system it shall be disabled.
Load the seat with the 13 loading discs so that the discs are firmly settled against the
PASS
back rest. If the height of the stack of discs exceeds the height of the back rest, or if support is needed, prevent the discs from sliding off by the use of the support.


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## Test and Requirements

### 4.5 Structural safety requirements

The structural safety requirements are met when the requirements according to 5.2 are fulfilled.

### 5.2 Requirements

The strength and durability requirements are fulfilled when, after testing in accordance with Table 2:
a) there are no fractures of any member, joint or component;
b) there is no loosening of joints intended to be rigid; and
c) the chair fulfils its functions after removal of the test loads.

## EN 1728: 2012, 7.4 Seat front edge static load test

Position the smaller seat loading pad at loading point F or J. Apply a vertical downward PASS force of 1600 N for 10 cycles through the centre of the loading pad.

## EN 1728: 2012, 7.9 Seat and back durability

The upper part of the chair shall be positioned so that the centre of the back rest is midway between two adjacent supporting points of the base with stops against these supporting points.
The seat load shall be applied vertically using the seat loading pad in positions A and C, and using the smaller seat loading pad in positions D, F, G and J. The back rest force shall be applied at an angle of $(90 \pm 10)^{\circ}$ to the back rest when fully loaded using the back loading pad.
All chairs shall be tested to steps 1 to 5 .
Chairs with a locking device(s) for seat and/or back rest angle movements shall be tested in step 2, first with the device(s) locked for half of the cycles and then with the device(s) unlocked for the other half of the cycles. For the first half of the cycles, the back rest shall be in the upright position. In steps 3, 4 and 5 the mechanism shall be set free to move.
One cycle shall consist of the application and removal of the force(s) at the respective loading point(s).
Each step shall be completed before going to the next.
PASS
First the seat force shall be applied and maintained while the back rest force is applied. If the back rest pad is pivoting around a horizontal axis above the height of the seat and is free to move, the horizontal force shall be applied on the axis. If height adjustable, the axis shall be set as close as possible to 300 mm above point A . If the axis cannot be adjusted to 300 mm , adjust the force to produce the same bending moment.

| Step | Force | Number of cycles |
| :---: | :---: | :---: |
| A | 1500 | 120000 |
| C | 1200 | 80000 |
| B | 320 |  |
| J | 1200 | 20000 |
| E | 320 |  |
| F | 1200 | 20000 |
| H | 320 |  |
| D | 1100 | 20000 |
| G | 1100 |  |

EN 1728: 2012, 7.5 Arm rest downward static load test - central
The arm rests shall be loaded vertically with 750 N before the stability tests and 900 N after the stability test respectively, by means of the local loading pads for 5 cycles. The loading points shall be at the mid point of the arm rest length and centred side to side. PASS In the case of an arm rest which is not horizontal, or which is curved, the length is measured in a horizontal plane 20 mm below the highest point of the arm rest.
Apply the force to both arm rests simultaneously.


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## Test and Requirements

## Annex A

Tests included in Table A. 1 are not safety tests but may be useful for testing functions of the chair.
If the functional tests listed in Table A. 1 of Annex A (informative) are carried out, they can be carried out on a separated sample.

## EN 1728: 2012, 7.6 Arm rest downward static load test - front

The arm rests shall be loaded vertically with 450 N by means of the local loading pads for 5 cycles. The loading points shall be 75 mm from the front edge and centred side to PASS side.
Apply the force to both arm rests simultaneously.

## EN 1728: 2012, 7.7 Arm rest sideways static load test

For seating with one arm rest, apply an outward force of 400 N to the arm rest at the point along the arm rest most likely to cause failure, but not less than 100 mm from the end of the arm rest structure. Apply the force for 10 cycles using the local loading pad. If the item tends to overturn, apply a load on the side of the seat opposite to the arm rest under test large enough to prevent the item from overturning.
For seating with two arm rests, apply an outward force of 400 N to each arm rest of the unit simultaneously at the point along the arm rests most likely to cause failure, but not less than 100 mm from either end of the arm rest structure, (see Figure 13). Apply the force for 10 cycles using the local loading pad.
For seating with three or more arm rests, carry out the test on one pair of adjacent arm rests. All different arm rest designs shall be tested.

## EN 1728: 2012, 7.13 Castor and chair base durability

This test does not apply to chairs with castors which are braked when the chair is loaded.
The chair shall be placed on a rotating table with a test surface so that the rotating axis of the chair coincides with the rotating axis of the table. Load the seat at point A with the load of 110 kg . The base shall be loosely fixed in such a way that there is no rotation of the base but that the natural movements of the castors during testing are not prevented. The castors shall be left free to swivel and the table shall be rotated with a rate of six cycles per minute. The angle of rotation shall be from $0^{\circ}$ to $180^{\circ}$ and back. One rotation forward and one rotation backward constitutes one cycle.

PASS
Alternatively attach the chair to a device that provides a linear movement of ( $1000 \pm$ 250) mm and a test surface. Load the seat at point A with the load of 110 kg . The base shall be loosely fixed in such a way that there is no rotation of the base but that the natural movements of the castors during testing are not prevented. The castors shall be left free to swivel and the device shall move with a rate of six cycles per minute. One movement forward and one movement backward constitutes one cycle.
For both alternatives it is recommended to perform the test with a speed as slow as possible with a short break when the device changes direction. Repeat the test for 36000 cycles.

## Remark:

1. For the sample information and pictures, please refer to the following page.


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Test Report

## SAMPLE INFORMATION AND PICTURES

Weight: 17.80 kg
Overall Dimensions: $\quad 695 \sim 770 \mathrm{~mm}$ D x 715 mm W x 875~1100 mm H
Other Dimensions: Upper frame: 540~725 mm D x 645 mm W, base radius: 345 mm .
Sample as Received


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***End of Report ${ }^{* * *}$

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