

Sample Description : RIO ALUMINUM ARM CHAIR

Item No. : DA639RO

Country of Origin : CHINA

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 : Mar 02, 2022

Sample Resubmission Date : Mar 23, 2022

Test Performing Date : Mar 02, 2022 to Mar 25, 2022

Test Performed : Selected test(s) as requested by applicant

### Test Result Summary

| No.                                                        | Test(s) Requested | Result(s) | Comments |
|------------------------------------------------------------|-------------------|-----------|----------|
| 1                                                          | UNE-EN 1022:2019  | 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



Bill Wang  
Authorized Signatory



SDHL2203002930FT



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**TESTS AND RESULTS**
**Test Conducted:**

UNE-EN 1022:2019 Furniture - Seating - Determination of stability.

**No. of Sample:**

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

| Test and Requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Test Results |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| <b>7 Test methods for assessing stability of seating except loungers</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |              |
| <b>7.1 General</b><br>The stability tests defined in Clause 7 are not applicable to seating which has both the height of the seat loading point < 200 mm and a mass < 5 kg.<br>Position the seating on the floor with its components as specified in Table 1.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |              |
| <b>7.2 Requirements</b><br>When tested according to 7.3 and 7.4, the seating shall not overturn. Where loads are not specified in other standards the requirements contained in Table B.1 shall be used.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |              |
| <b>7.3.1 Forwards overbalancing, all seating</b><br>Position the seating on the floor surface with two adjacent supporting points on the front or base restrained by stops.<br>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.<br>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 pad meets the upper surface of the seat.<br>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.<br>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. | PASS         |
| <b>7.3.2 Forwards overturning for seating with footrest</b><br>For seating with foot rests of tubular construction, or where the foot rest depth is less than 120 mm, repeat the procedure in 7.3.1 applying the vertical force of 1100 N for swivelling seats and 600 N for all other seating respectively at the most onerous point along the centre line of the tube, or the middle of the foot rest surface, by any suitable means.<br>For all other seating with foot rests apply the vertical force of 600 N at the most onerous point 60 mm from the edge of the foot rest by means of the local loading pad.<br>For foot rests apply a force of 20 N horizontally outwards along a horizontal line extended forward from the point where the base of the loading pad meets the upper surface of the foot rest.                                                                                                                                                                                                                                                                                                                                                                                          | N/A          |



| Test and Requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Test Results |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| <p><b>7.3.3 Corner stability test</b></p> <p>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.</p> <p>Position the seating on the floor surface with two adjacent supporting points on the front, or base restrained by stops.</p> <p>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 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.</p> <p>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.</p>                                         | N/A          |
| <p><b>7.3.4 Sideways overbalancing, all seating without arms</b></p> <p>This test is applicable to all seating where the top edge of the seat on the transverse plane is 50 mm or less above the height of the loaded seat loading point. The transverse plane shall pass through the seat loading point.</p> <p>Position the seating on the floor surface with two adjacent supporting points on one side, or base restrained by stops.</p> <p>Apply a force of 600 N vertically by means of the loading pad at a point 60 mm behind the edge of the load bearing structure on the side nearest the stopped feet and on the transverse plane of the seat.</p> <p>In the transverse plane, apply a sideways force of 20 N horizontally outwards along a line from the point where the base of the loading pad meets the upper surface of the seat.</p>                                                                                                                                                                                                                                                                                                                                   | N/A          |
| <p><b>7.3.5 Sideways overturning, all other seating</b></p> <p><b>7.3.5.1 General</b></p> <p>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).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |              |
| <p><b>7.3.5.2 Seating with arm rests</b></p> <p>Position the seating on the floor surface with two adjacent supporting points on one side, or base restrained by stops.</p> <p>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.</p> <p>Apply a force of 350 N vertically by any suitable device, at a position on the centre line 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.</p> <p>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.</p> <p>Apply a horizontal force of 20 N outwards, and perpendicular to the line joining the stopped feet, for at least 5s, 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.</p> | PASS         |





| Test and Requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Test Results |
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| <p><b>7.3.5.3 Seating with raised side edges</b></p> <p>Position the seating on the floor surface with two adjacent supporting points on one side, or base restrained by stops.</p> <p>Apply a force of 250 N vertically by 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.</p> <p>Apply a force of 350 N by any suitable device, at a position no greater than 40 mm inwards from the outside edge of load bearing structure on the side nearest the stopped feet and on the transverse plane of the seat.</p> <p>If the distance between the loading points is less than 200 mm, a force that provides the same overturning moment of the combined forces, <math>F_1</math> of 250 N and <math>F_2</math> of 350 N, shall be applied at the most suitable point on the transverse plane.</p> <p>Apply a horizontal force of 20 N outwards, and perpendicular to the line joining the stopped feet, at the upper surface of the raised edge in line with the vertical force 350 N and on the side with stopped feet.</p>                                                                                                                                                                                                                   | <p>N/A</p>   |
| <p><b>7.3.6 Rearwards overturning all seating with back rests</b></p> <p>The test is not applicable to seating that has adjustable back rest inclination that cannot be locked in position.</p> <p>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.</p> <p>Position the seating on the floor surface with the rear legs, two adjacent supporting points on the back, or base restrained by stops.</p> <p>Apply a vertical force of 600N to the seat by means of the loading pad at the seat loading point (A).</p> <p>Apply the force <math>F_2</math> 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.</p> <p>When the seating has more than one sitting place, carry out the procedure on two most adverse sitting places simultaneously.</p> <p>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).</p> | <p>PASS</p>  |
| <p><b>7.4 Additional test procedures for seating with reclining back rests</b></p> <p><b>7.4.1 General</b></p> <p>In addition to the tests in 7.3, seating with reclining back rests shall be subjected to the tests for tilting or reclining, as specified below provided their geometry falls within the reclining angle ranges defined for the appropriate tests.</p> <p>Seating with back rests permanently reclined which fall within the reclining angle ranges for reclining chairs, shall be tested as reclining chairs.</p> <p>The test shall be carried out with the seating in the fully tilted or reclined condition.</p> <p><math>\gamma</math> is the angle between the seat and back.</p> <p><math>\theta</math> is the angle of inclination of the back from the horizontal.</p> <p>For seating with shaped or padded seats or backs the load position template shall be used to establish the relevant angles of inclination</p> <p>If the height of the stack of loading discs used in tests 7.4.2, 7.4.3, 7.4.4 and 7.4.5 exceeds the height of the back rest, prevent the upper discs from sliding off by the use of the support.</p>                                                                                                                                                                                                 |              |



| Test and Requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Test Results |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| <b>7.4.2 Tilting chairs</b><br>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.<br>Load the seat with the 13 loading discs for swivelling seats and 11 discs for all other seating respectively 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, or if support is needed, prevent the discs from sliding off by the use of the support. | N/A          |
| <b>7.4.3 Reclining seating with leg rest</b><br>The test method applies to all values of $\theta \geq 10^\circ$ and less than $55^\circ$ and values of $\gamma$ between $90^\circ$ and $170^\circ$ . All other reclining seating with leg rests shall be treated as tilting seating (7.4.2)<br>With the seating in the fully reclined configuration, load the back of the seat with 8 loading discs by means of the support device and place 3 loading discs onto the leg rest at a distance Z from the intersection of the seat and back.                       | N/A          |
| <b>7.4.4 Reclining seating without leg rest</b><br>The test method applies to all values of $\theta \geq 10^\circ$ and less than $45^\circ$ and values of $\gamma$ between $90^\circ$ and $170^\circ$ . All other reclining seating without foot rests shall be treated as tilting seating (7.4.2).<br>Load the back of the seating with 8 loading discs by means of the support device and place 3 loading discs onto the front of the seat of the chair at a distance X from the intersection of the seat and back.                                            | N/A          |
| <b>7.4.5 Rearwards stability test for rocking chairs</b><br>This test replaces the rearwards overturning test.<br>Load the chair with the 8 discs so that the discs rest against the chair back. When testing rocking chairs, it may be necessary to restrain the loading discs with lightweight strapping, e.g. tape, string or webbing.<br>Move the chair forwards as far as is practicable or until the back is vertical. Allow the chair to rock rearwards freely under gravity.                                                                             | N/A          |
| <b>8 Loungers</b><br><b>8.1 General</b><br>The stability tests defined in Clause 8 are not applicable to loungers which have both a seat height $< 200$ mm and a mass $< 5$ kg. The height shall be determined by measuring from the floor to the upper surface of the seating area at the geometrical centre of the lounge loaded with 600 N applied vertically downward using the loading pad.<br>Position the lounge on the floor with its components as specified in Table 3.                                                                                |              |
| <b>8.2 Requirements</b><br>When tested according to 8.3, the seating shall not overturn. Where loads are not specified in other standards the requirements contained in Table B.2 shall be used.                                                                                                                                                                                                                                                                                                                                                                 |              |
| <b>8.3.1 Forward stability</b><br>Apply a downwards force of 600 N vertically, by means of the loading pad, acting at the point on the median plane of the lounge, 60 mm behind the front edge of the load bearing structure. Apply a force of 20 N 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.                                                                                                                                                         | N/A          |



| Test and Requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Test Results |
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| <b>8.3.2 Sideways overturning</b><br>Simultaneously apply vertical forces of 600 N by means of the loading pad, at the points that are on a line 60 mm from one side of the lounge. The first point shall be 300 mm from the front edge of the structure of the lounge, with additional forces applied in 600 mm increments, but at least 300 mm from the rear edge of the lounge. For loungers with arm rests the distance of the vertical force of 600 N shall be at least 300 mm from the front edge of the arm rest construction. If the arm rest is more than 400 mm in length apply additional vertical force of 250 N in the centre of the arm rest.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | N/A          |
| <b>7.3.6 Rearwards overturning all seating with back rests</b><br>The test is not applicable to seating that has adjustable back rest inclination that cannot be locked in position.<br>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.<br>Position the seating on the floor surface with the rear legs, two adjacent supporting points on the back, or base restrained by stops.<br>Apply a vertical force of 600N to the seat by means of the loading pad at the seat loading point (A).<br>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.<br>When the seating has more than one sitting place, carry out the procedure on two most adverse sitting places simultaneously.<br>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). | N/A          |
| <b>7.4.3 Reclining seating with leg rest</b><br>The test method applies to all values of $\theta \geq 10^\circ$ and less than $55^\circ$ and values of $\gamma$ between $90^\circ$ and $170^\circ$ . All other reclining seating with leg rests shall be treated as tilting seating (7.4.2)<br>With the seating in the fully reclined configuration, load the back of the seat with 8 loading discs by means of the support device and place 3 loading discs onto the leg rest at a distance Z from the intersection of the seat and back.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | N/A          |

**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 INFORMATION AND PICTURES

**Weight:** 5.35 kg

**Overall Dimensions:** 580 mm D x 580 mm W x 790 mm H

**Other Dimensions:** /

#### Sample as Received



View 1



View 2



View 3



View 4

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



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