



Test Report

No.SDHL2010026840FT

Date: Oct 20, 2020

Page 1 of 7

DECO SEATING LIMITED
ROOM 1609, 16 FLOOR. MAIN TOWER OF GUANGDONG INTERNATIONAL HOTEL,
NO. 339 HUANSI EAST ROAD, GUANGZHOU, GUANGDONG, P.R.CHINA

Sample Description : DA639RO RIO ALUMINUM ARM CHAIR

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.

Sample Receiving Date : Oct 12, 2020

Test Performing Date : Oct 12, 2020 to Oct 20, 2020

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

Test Result Summary

No.	Test(s) Requested	Result(s)	Comments
1	UNE EN 581-1:2017	PASS	/
2	UNE EN 581-2:2016/AC:2016 (Contract), excluding information for use	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

scan to see the report



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SGS-CSTC Standards Technical Services Co., Ltd.
Shunde Branch Harbin

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中国·广东·佛山市顺德区大良街道办事处五沙顺和南路1号欧洲工业园1号厂房首层 邮编: 528333 t (86-757)22805888 f (86-757)22805858 e sgs.china@sgs.com

TESTS AND RESULTS
Part 1. Test Conducted:

UNE EN 581-1:2017 Outdoor furniture--seating and tables for camping, domestic and contract use—Part 1. General safety requirements.

No. of Sample:

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

Test and Requirements	Test Results
5 Safety requirements	
5.1 General In order to avoid physical injury when the product is in its intended position of use, all edges and corners shall be rounded, chamfered or otherwise protected. This applies to: - Seating: Edges of the seat, back rest and arm rests and any part of the bottom surface of the seat at a distance less than 120 mm from any edge, where a finger can commonly access; - Tables: Table tops, any part of the underside of the top surface at a distance less than 500 mm from any edge below the table, where a knee and/or an arm can commonly access. All other parts shall be free from burrs, sharp edges and sharp points. Movable and adjustable parts shall be designed so that injuries and inadvertent operation are avoided. It shall not be possible for any load bearing part of the furniture to come loose unintentionally. All parts which are lubricated to assist sliding shall be designed to protect users from lubricant stains when in normal use.	PASS
5.2 Tubular components There shall be no accessible holes in the ends of tubular components with a diameter between 7 mm to 12 mm and with a depth more or equal to 10 mm. The bottom of tubular legs in contact with the floor shall be closed or capped, however, holes in them are allowed as long as they are not between 7 and 12 mm.	PASS
5.3 Shear and squeeze points	
5.3.1 Shear and squeeze points when erecting, adjusting and folding away Unless 5.3.2 or 5.3.3 are applicable, shear and squeeze points that are created only during erecting, adjusting or folding away are acceptable providing the user can be assumed to be in control of his/her movements and to be able to cease applying the force immediately on experiencing pain.	N/A
5.3.2 Shear and squeeze points under the influence of powered mechanisms There shall be no accessible shear and squeeze points created by parts of the furniture operated by powered mechanisms, e.g. mechanical springs and gas lifts.	N/A
5.3.3 Shear and squeeze points during use There shall be no accessible shear and squeeze points created by loads applied during normal use. Shear and squeeze points are not acceptable if there is a risk of injury created by the weight of the user during normal movements and actions, e.g. attempting to move the seating by lifting the seat or by adjusting the backrest.	PASS



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Shunde Branch Headquarters

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中国·广东·佛山市顺德区大良街道办事处五沙顺和南路1号欧洲工业园1号厂房首层 邮编: 528333 t (86-757)22805888 f (86-757)22805858 e sgs.china@sgs.com

Part 2. Test Conducted:

UNE EN 581-2:2016/AC:2016 Outdoor furniture – Seating and tables for camping, domestic and contract use – Part 2: Mechanical safety requirements and test methods for seating, excluding information for use.

No. of Sample:

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

Test Severity: Contract Level. For the test severity in relation to applications, please refer to Annex A.

Test and Requirements	Test Results
7 Safety, strength and durability requirements for other seating	
7.1 General Before and after the strength, durability and stability tests are carried out, the requirements of UNE EN 581-1 shall be fulfilled.	PASS
7.2 Stability, strength and durability (With reference to the test methods of UNE EN 1022:2005 and UNE EN 1728:2012/AC:2013 D/E/F) The seating shall be tested for strength, durability and stability following the order listed in Table 2. The safety, strength and durability requirements are fulfilled after testing in accordance with Table 2 when: a) there are no fractures of any joint, member or component, b) there is no loosening of joints intended to be rigid, c) the seating fulfils its function after removal of the test loads, d) the seating fulfils the safety requirements, e) the product shall not overturn when subjected to the stability tests.	
6.4 Seat static load and back static load test Only the vertical seat static force shall be applied to items without a back rest. Apply the downward force of 2000N at the seat loading position. With the downward force maintained, apply the back force of 560N at back loading position, and the back force shall not less than 500N. For the seat not being tested load with 750N. Remove the back load and then the seat load. Repeat above operation for 10 cycles followed by an additional cycle with 30min±10s. <i>Note: If seat and back are of one piece of flexible material, only the tests on seat shall be carried out.</i>	PASS
6.5 Seat front edge static load Apply the vertical force of 1300N using the seat loading pad at a point on the seat centre line 100 mm inwards from the front edge of the structure. For the seat not being tested load with 750N. Repeat above operation for 10 cycles.	PASS
6.17 Combined seat and back durability test Only the vertical seat durability force shall be applied to items without a back rest. Apply the downward force of 1000N at the seat loading position. With the downward force maintained, apply the back force of 333N at back loading position. Remove the back load and then the seat load, and the back force shall not less than 300N. For the seat not being tested load with 750N. Repeat above operation for 50000 cycles.	PASS



Test and Requirements	Test Results
6.19 Durability test on seating with a multi-position back rest Place the seating in normal use position, with the back rest in the most adverse position. Apply the load of 750N on the seat loading point. Apply rearwards alternating forces of 250N perpendicularly to the back rest, the height of the back rest loading points shall be 100 mm above the back loading point. They shall be 50 mm from the right and left outer edges of the back rest. Repeat above operation for 20000 cycles. <i>Note: This test is only applicable to seating with three or more manually adjustable reclined positions of the backrest.</i>	N/A
6.11 Arm rest downwards static load test For seating which only has one arm rest, or which has two arm rests where the distance between the centre of the arm rests is more than 1000 mm, apply the vertical force of 900N at the points along the arm rest most likely to cause failure, but not less than 100 mm from the end of the arm rest structure. For seating with two arm rests, where the distance between the centre of the arm rests is 1 000 mm or less, apply the vertical force simultaneously to both arm rests. 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. Repeat above operation for 10 cycles. <i>Note: If the armrest is less than 15mm wide, carry out test with 700N for contract use.</i>	PASS
6.20 Arm rest durability test The test load of 400 N shall be applied simultaneously on two points for 30000 cycles, at the point most likely to cause failure, but not less than 100 mm from the front or rear edge of the arm rest length and through the centre of the width of the arm rest, but not more than 100 mm from the inner edge of the arm rest. The force shall be applied at an angle of $(10 \pm 1)^\circ$ to the vertical, and to both arm rests simultaneously for seating with only one seating position and to one arm rest only for seating with multiple seating positions.	PASS
6.15 Leg forward static load test For seating with a single seat, apply the seat load of 1000N at the seat loading position to all seat positions. Apply the horizontal force of 400N centrally to the rear of the seat, at seat level, in a forward direction, and this force shall not less than 250N. For seating with multiple seating positions, apply the horizontal force of the most adverse seat position. For seating with only three legs, one foot on the fore and aft centre line of the item of seating and one other foot shall be restrained by stops. Repeat above operation for 10 times.	PASS
6.16 Leg sideways static load test Apply the seat load of 1000N at a suitable position not more than 150mm from the unload edge of the seat. Apply a horizontal force of 300N centrally to the unrestrained side of the seat, at seat level, in a direction towards the restrained feet, and this force shall not less than 200N. For seating with only three legs, one foot on the fore and aft centre line of the item of seating and one other foot shall be restrained by stops. Repeat above operation for 10 times.	PASS



Test and Requirements	Test Results
6.24 Seat impact test Allow the seat impactor to fall freely from the height of 240mm to the seat loading position, Repeat the test at one other position considered likely to cause failure, but not less than 100 mm from the front edge of the seat. For multiple seating units, apply the test to one end seat and an intermediate seating position. Repeat above operation for 10 times. <i>Note: This test shall not be carried out on seating with a seat height > 600mm.</i>	PASS
6.8 Foot rest static test Apply the specified downward force to the seat at the seat loading point. Apply a vertical force of 1200N by means of the local loading pad acting 80 mm from front edge of the load bearing structure of the foot rest at those points most likely to cause failure. For round cross section ring shaped footrests, the force shall be applied through the centre of the ring cross section. Repeat above operation for 10 cycles. <i>Note: This test is carried out only on seating with a seat height > 700mm.</i>	N/A
6.2 Forwards overbalancing, all seating Apply a force $F_v = 600$ N 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 $F_H = 20$ 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
6.3 Forwards overturning for seating with footrest For seating with footrests repeat the procedure in 6.2 applying the vertical and horizontal loads to the footrests. For footrests of tubular construction the loads shall be applied along the centre line of the tube.	N/A
6.4 Sideways overbalancing, all seating without arms Apply a force $F_v = 600$ N 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 $F_H = 20$ 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.	N/A
6.5 Sideways overbalancing, all seating with arms Apply a vertical force $F_1 = 350$ N 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 $F_2 = 250$ N 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 at the same distance from the backrest as the arm loads. Apply a horizontal force $F_H = 20$ 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 and Requirements	Test Results
6.6 Rearwards overbalancing, all seating with backs All adjustable backs shall be set in their most upright position. Apply a vertical force $F_v = 600 \text{ N}$ to the seat by means of the loading pad at the seat loading point (A) determined by the loading point template. Determine the distance (H) in millimeters between the loaded seat and the floor. - For seating having a value of $H \geq 720 \text{ mm}$ uses a force $F_H = 80 \text{ N}$. - For seating having a value of $H < 720 \text{ mm}$ calculate the force F, in newtons, required from the following formula: $F_H = 0, 2857 (1000-H)$. Where: H is in millimeters; F is in newtons. Apply the force F horizontally for at least 5 s in a rearward direction to the back of the seating at the point (B) determined by the loading point template, 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
7.7 Reclining chairs without footrest The test method applies to all values of $\theta \geq 10$ and values of γ between 90° and 170° . Load the back of the chair with 8 loading discs (10 kg) by means of the support device (4.5) and place three 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
8 Information for use	
8.1 General Instruction for use shall be provided in the language(s) of the country where the seating are sold. These instructions shall be headed "IMPORTANT, RETAIN FOR FUTURE REFERENCE: READ CAREFULLY" in letters no less than 5 mm high, unless if the following information are permanently marked on the product. It shall contain at least the following details: a) name and address of the manufacturer/supplier/retailer; b) conditions for use of the product (domestic, camping or contract). If applicable: c) assembly instructions; d) instructions for the care and maintenance of the seating; e) if the seating is fitted with seat height adjustments with energy accumulators, an additional note is required pointing out that only trained personnel may replace or repair seat height adjustment components with energy accumulators.	N/R

Annex A: Classification of Test severity in relation to applications

- **Outdoor seating for contract use.** Outdoor seating intended for non-private use in places with public access.
- **Outdoor seating for domestic use.** Outdoor seating intended for private use in places use without public access.
- **Outdoor seating for camping use.** Outdoor seating foldable or knock-down and light-weight, intended for use in connection with camping and travelling.

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: 5.30 kg

Overall Dimensions: 595 mm D x 575 mm W x 780 mm H

Other Dimensions: /

Sample as Received



View 1



View 2



View 3



View 4

End of Report



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