

### SCANDIPROJECTS COCKTAIL SCANDINAVE

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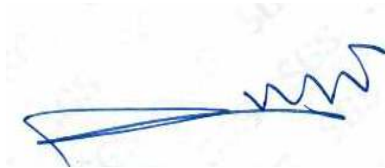
The following sample(s) was / were submitted and identified on behalf of the client. SGS is not responsible for the authenticity, integrity and results of the data and information and / or the validity of the conclusion. Results apply to the sample as received.

SGS Reference No.	NBHL1905008461FT
Sample Description	IRON CHAIR
Item No.	NIDZCHA1NOI & NIDZCHA1BLA
Sample Receiving Date	MAY 24, 2019
Sample Re-submitted Date	JUN 10, 2019
Test Performing Date	MAY 24, 2019 TO JUN 11, 2019

### Test Result Summary

Test(s) Requested	Result(s)
EN 12520:2015 Excluding Clause 6 information for use	PASS
<b>Remark:</b>	
1. This declaration of conformity is only based on the result of this laboratory activity, the impact of the uncertainty of the results was not included. 2. For further details, please refer to the following page(s).	

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




David Fan  
Approved Signatory



**Test Conducted:** EN 12520:2015 Furniture - Strength, durability and safety – Requirements for domestic seating

**Test Result:**

Test Item	Test Method & Test Requirement	Test Result
<b>General requirements (EN 12520:2015, 5.1)</b>		
General requirements (EN 12520:2015, 5.1)	<p>All parts of the seating with which the user comes into contact, during intended use, shall be designed to ensure that physical injury and damage are avoided.</p> <p>These requirements are met when:</p> <p>a) edges of the seat, back rest and arm rests, which are in contact with the user when sitting are rounded or chamfered. All other edges accessible during use shall be free from burrs and/or sharp edges;</p> <p>b) ends of hollow components are closed or capped.</p> <p>Movable and adjustable parts shall be designed so that injuries and inadvertent operation are avoided.</p> <p>It shall not be possible for any load bearing part of the seating to come loose unintentionally.</p> <p>All parts which are lubricated to assist sliding shall be designed to protect users from lubricant stains when in normal use.</p>	PASS
<b>Shear and squeeze points (EN 12520:2015, 5.2)</b>		
Shear and squeeze points when setting up and folding (EN 12520:2015, 5.2.1)	<p>Unless 5.2.2 or 5.2.3 are applicable, shear and squeeze points, as defined in 3.3, that are created only during setting up and folding, including tipping seat, are acceptable, because the user can be assumed to be in control of his/her movements and to be able to cease applying the force immediately upon experiencing pain.</p> <p>The edges of parts moving relative to each other and creating shear and squeeze points shall be as specified in 5.1.</p>	NA
Shear and squeeze points under the influence of powered mechanisms (EN 12520:2015, 5.2.2)	<p>With the exception of tipping seats there shall be no shear and squeeze points created by parts of the seating under powered mechanisms e.g. springs and gas lifts.</p> <p>NOTE: Electrically operated seating is covered by EEC Directives for EMC, Machinery, Low Voltage or Medical Devices.</p>	NA
Shear and squeeze points during use (EN 12520:2015, 5.2.3)	<p>There shall be no shear and squeeze points created by loads applied during normal use.</p> <p>The loads applied during normal use can be found in Table 1.</p> <p>Shear and squeeze points are not acceptable if a hazard is 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.</p> <p>NOTE: This hazard is best prevented by the use of automatic locking mechanisms.</p>	PASS



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Test Item	Test Method & Test Requirement	Test Result
<b>Stability (EN 12520:2015, 5.3)</b>		
The seating shall fulfil the relevant requirements of EN 1022.		
All seating except loungers (EN 1022:2018, 7)		
General (EN 1022:2018, 7.1)	The stability tests are not applicable to seating which has both the height of the seat loading point < 200 mm and a mass < 5 kg.	/
Test procedures, all seating (EN 1022:2018, 7.3)		
Forwards overturning (EN 1022:2018, 7.3.1)	Apply a force $F_1$ of 600 N (for seating with multiple seats apply two forces simultaneously) vertically at the point on the centre line of the seat 60 mm behind the front edge of the load bearing structure. Apply a force $F_2$ of 20 N horizontally outwards from the point each vertical load contacts the seat surface for $(5\pm 2)$ s. For seating with a leg rest to support the weight of the user, repeat the test procedure on the leg rest with the leg rest fully extended. The seating shall not overturn.	PASS
Forwards overturning for seating with foot rest (EN 1022:2018, 7.3.2)	For seating with tubular foot rests or the foot rest depth is less than 120 mm, apply the vertical force $F_1$ of 600 N at the most onerous point along the tube centre line or the middle of the foot rest surface. For all other seating with foot rests apply the vertical force $F_1$ of 600 N at the most onerous point 60 mm from the edge of the foot rest. Apply a force $F_2$ of 20 N horizontally outwards from the point the vertical load contacts the foot rest surface for $(5\pm 2)$ s. The seating shall not overturn.	NA
Corner stability test (EN 1022:2018, 7.3.3)	This test is only applicable on seating possible to apply the loading pad at the specified position. Define the loading point 60 mm from the edge of the load bearing structure on a line as specified at the corner. Apply a force $F_1$ of 300 N vertically at the loading point for $(5\pm 2)$ s. For seating with multiple seats apply the force $F_1$ at the loading point on one outside seating position. The seating shall not overturn.	PASS
Sideways overturning, all seating without arm rests (EN 1022:2018, 7.3.4)	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. Apply a force $F_1$ of 600 N vertically at a point 60 mm behind the edge of the load bearing structure on the side nearest the stopped feet and on the seat transverse plane. In the transverse plane, apply a sideways force $F_2$ of 20 N horizontally outwards from the point the vertical load contacts the seat surface for $(5\pm 2)$ s. The seating shall not overturn.	PASS



Test Item	Test Method & Test Requirement	Test Result
Sideways overturning, all other seating with arm rests (EN 1022:2018, 7.3.5.2)	This test is applicable to all seating with arms on the transverse plane is more than 50 mm above the seat loading point. Apply a force $F_1$ of 250 N vertically at a point 100 mm to the seat median plane nearest the stopped feet and on the transverse plane. Apply a force $F_2$ of 350 N vertically at a position on the centre line of the arm up to a maximum 40 mm inwards from the outside edge of arm structure on 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 arm rest, apply force $F_2$ at 40 mm from the front or rear of the arm structure nearest the transverse plane. Apply a horizontal force $F_3$ 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 $F_2$ . The seating shall not overturn.	NA
Sideways overturning, all other seating with raised side edges (EN 1022:2018, 7.3.5.3)	This test is applicable to all seating where the seat top edge on the transverse plane is more than 50 mm above the seat loading point. Apply a force $F_1$ of 250 N vertically at a point 100 mm to the seat median plane nearest the stopped feet and on the transverse plane. Apply a force $F_2$ of 350 N at a position no greater than 40 mm inwards from the outside edge of the raised edge on the side nearest the stopped feet and on the transverse plane. If the distance between the loading points is less than 200 mm, apply a force that provides the same overturning moment of the combined forces $F_1$ and $F_2$ at the most suitable point on the transverse plane. Apply a horizontal force $F_3$ of 20 N outwards and perpendicular to the line joining the stopped feet, for $(5 \pm 2)$ s, at the upper surface of the raised edge in line with vertical force $F_2$ . The seating shall not overturn.	NA
Rearwards overturning all seating with back rests (EN 1022:2018, 7.3.6)	The test is not applicable to seating that has adjustable back rest inclination that cannot be locked in position. Apply a vertical force $F_1$ of 600N to the seat at seat loading point. Apply the force $F_2$ ( $F_2 = 80$ N if $H \geq 720$ mm; $F_2 = 0.2857(1000-H)$ N if $H < 720$ mm. $H =$ Height of loaded seat above the floor, in mm) for $(5 \pm 2)$ s horizontally rearwards to the seating back at back loading point B, or at the top edge of back rest, whichever is the lower. When the seating has more than one sitting place, apply the procedure on two most adverse sitting places simultaneously. The seating shall not overturn.	PASS
Additional test procedures for seating with reclining back rests (EN 1022:2018, 7.4)		
Tilt chairs (EN 1022:2018, 7.4.2)	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 11 loading discs so that the discs are firmly settled against the back rest. Apply the loads for $(120 \pm 60)$ s. The seating shall not overturn.	NA



Test Item	Test Method & Test Requirement	Test Result
Reclining seating with leg rest (EN 1022:2018, 7.4.3)	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 tested as tilting seating. With the seating in the fully reclined configuration, load the back of the seat with 8 loading discs and place 3 loading discs onto the leg rest at a distance Z from the intersection of the seat and back. Apply the loads for $(120 \pm 60)$ s. The seating shall not overturn.	NA
Reclining seating without leg rest (EN 1022:2018, 7.4.4)	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 tested as tilting seating. Load the back of the seating with 8 loading discs 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. Apply the loads for $(120 \pm 60)$ s. The seating shall not overturn.	NA
Rearwards stability test for rocking chairs (EN 1022:2018, 7.4.5)	This test replaces the rearwards overturning test from 7.3.6. Load the chair with 8 loading discs so that the discs rest against the chair back. Move the chair forwards as far as is practicable or until the back is vertical. Allow the chair to rock rearwards freely under gravity. The seating shall not overturn.	NA
Loungers (EN 1022:2018, 8)		NA
<b>Strength and durability (EN 12520:2015, 5.4)</b> The strength and durability requirements are fulfilled when during and after testing in accordance with Table 1: <ol style="list-style-type: none"> <li>there are no fractures of any member, joint or component;</li> <li>there are no loosening of joints intended to be rigid;</li> <li>seating fulfils its functions after removal of the test loads;</li> <li>seating fulfils the stability requirements.</li> </ol>		
Seat static load and back static load test (EN 1728:2012, 6.4)	For seating without a back rest, only seat force shall be applied. Load seat not being tested with 750 N. Apply specified seat force 1300 N at the seat loading position. With the seat force maintained, apply specified back force 450N at back loading position or at 100 mm below the top of the back. When the back inclination $\theta$ is $\leq 55^\circ$ & $< 70^\circ$ to horizontal: Seat force $F_1$ (N) = $1300 \times \sin \theta$ Back force $F_2$ (N) = $(\theta/60^\circ - 0.1666) \times 1300 \times \cos \theta$ When the back inclination $\theta$ is $< 55^\circ$ to horizontal: Seat force $F_1$ (N) = $1300 \times 0.75$ Back force $F_2$ (N) = $1300 \times 0.75 \times \cos \theta$ Repeat the operation for 10 cycles, 10s each cycle. If the item tends to overturn, reduce $F_2$ (min. 410N) to prevent rearwards overturning.	PASS
Seat front edge static load test (EN 1728:2012, 6.5)	Load seat not being tested with 750 N. Apply the force 1300 N at a point on the seat centre line 100 mm inwards from the front edge of the structure. Repeat the operation for 10 cycles, 10s each cycle. If the seating tends to overturn, reduce the force to a magnitude that just prevents overturning.	PASS



Test Item	Test Method & Test Requirement	Test Result
Foot rest static load test (EN 1728:2012, 6.8)	Not apply to seating with a seat height $\leq$ 600mm. Apply a downward force 750N to seat at the seat loading point. Apply a vertical force 1000N acting 80 mm from front edge of the load bearing structure of the foot rest at the point most likely to cause failure. For round cross section ring shaped footrests, apply the force through the centre of the ring cross section. Repeat the operation for 10 cycles, 10s each cycle. If the seating tends to overturn, increase the load on seat to a magnitude that just prevents overturning.	NA
Arm rest sideways static load test (EN 1728:2012, 6.10)	Apply an outward force 300N to one arm rest or to each arm rest of the unit simultaneously 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. Repeat the operation for 10 cycles, 10s each cycle.	NA
Arm rest downwards static load test (EN 1728:2012, 6.11)	Apply vertical force 700N to the arm rest or to both arm rests simultaneously 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. Repeat the operation for 10 cycles, 10s each cycle.	NA
Combined seat and back durability test (EN 1728:2012, 6.17)	For seating without a back rest, only seat force shall be applied. Load seat not being tested with 750 N. Apply specified seat force 1000N at the seat loading position. With the seat force maintained, apply specified back force 300N at back loading position or at 100 mm below the top of the back. When the back inclination $\theta$ is $\leq 55^\circ$ & $< 70^\circ$ to horizontal: Seat force $F_3$ (N) = $1000 \times \sin \theta$ Back force $F_4$ (N) = $(\theta/60^\circ - 0.1666) \times 1000 \times \cos \theta$ When the back inclination $\theta$ is $< 55^\circ$ to horizontal: Seat force $F_3$ (N) = $1000 \times 0.75$ Back force $F_4$ (N) = $1000 \times 0.75 \times \cos \theta$ Repeat the operation for 25000 cycles. If the item tends to overturn, reduce $F_4$ to prevent rearwards overturning.	PASS
Seat front edge durability test (EN 1728:2012, 6.18)	Apply the vertical force 800N 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 the test for 20000 cycles. If the item tends to overturn, reduce the force to a magnitude that just prevents overturning.	PASS
Arm rest durability test (EN 1728:2012, 6.20)	Apply the force of 400 N on each arm rest 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. Repeat the test for 10000 cycles.	NA
Leg forward static load test (EN 1728:2012, 6.15)	Apply the seat load 1000N to all seat loading positions. Apply a horizontal force 400N centrally to the rear of the seat or to the rear of the most adverse seat position for seating with multiple seating positions, at seat level, in a forward direction. Repeat the operation for 10 cycles, 10s each cycle. If the item tends to overturn, reduce the force to a magnitude that just prevents overturning.	PASS



Test Item	Test Method & Test Requirement	Test Result
Leg sideways static load test (EN 1728:2012, 6.16)	Apply the seat load 1000N at a suitable position across the seat but not more than 150 mm from the unloaded edge of the seat. Apply a horizontal force 300N centrally to the unrestrained side of the seat, at seat level, in a direction towards the restrained feet. Repeat the operation for 10 cycles, 10s each cycle. If the item tends to overturn, reduce the force to a magnitude that just prevents overturning.	PASS
Seat impact test (EN 1728:2012, 6.24)	Allow the seat impactor to fall freely from a height 180 mm onto the seat loading position. Apply the operation for 10 cycles. Repeat the test at one other position considered likely to cause failure, but not less than 100 mm from any edge of the seat.	PASS
Backwards fall test (EN 1728:2012, 6.28)	This test is only for single seating units where the back will be the first part of the structure to strike the floor and the force used to overturn the chair rearwards is less than 30 N. Apply a rearward horizontal load to a point 50 mm below the top of the back rest in the centre of the back rest. Push the top of the back rest rearwards and allow it to fall freely on its back onto the rubber faced test floor without initial force or velocity. Repeat the operation for 5 cycles.	PASS
Back impact test (EN 1728:2012, 6.25)	This test is for all seating not tested in accordance with Backwards Fall Test. With the front legs, feet or castors restrained by stops from moving forward, strike the structure of the centre of the top outside of the back with the impact hammer through a height 120 mm (or angle 28°). Repeat the operation for 10 cycles.	NA
<b>Information for use (EN 12520:2015, 6)</b>		
Information for use (EN 12520:2015, 6)	Information for use shall be available in the language of the country in which it will be delivered to the end user. It shall contain at least the following details: a) assembly instructions, where applicable; b) instructions for the care and maintenance of the seating; c) 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.	NP

**Remark:**

1. NA = Not applicable; NP = Not provided
2. As client's requirement, only white sample was tested.



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**Photo Appendix**



Test sample as received - View 1



Test sample as received - View 2



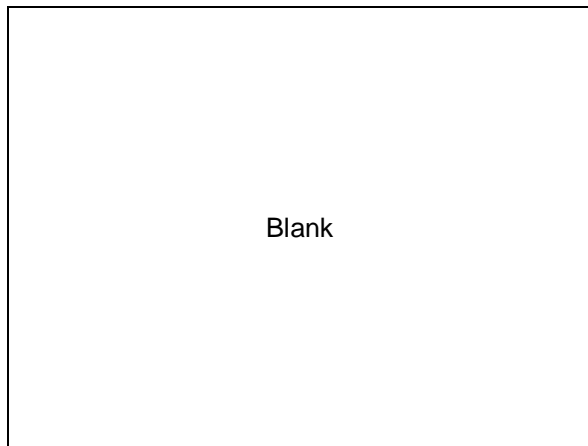
Test sample as received - View 3



Test sample as received - View 4



Sample group



Blank

SGS authenticate the photo on original report only

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

