

REPORT

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Götessons Industri AB Rönnåsgatan 5A 523 38 ULRICEHAMN SWEDEN

Testing of seating furniture according to EN 16139:2013

(3 appendices)

Customer: Götessons Industri AB

Test object/ID: Sofa/The Hut

Test method: EN 16139:2013 Furniture - Strength, durability and safety -

Requirements for non-domestic seating. Test level 1

Scope: Complete test

Date of test: 2017-03-30 – 2017-04-11

Test result: The tested object passed the test

Reservation: The test results in this report apply solely to the specimen tested

Test environment: $23 \pm 2^{\circ}\text{C}$ and $50 \pm 5\%$ relative humidity

RISE Research Institutes of Sweden AB Building Technology - Wood Technological Assessment

Performed by Examined by

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Appendices

- 1. Test result (3 pages)
- 2. Description of test object (1 page)
- 3. Pictures (1 page)

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Test result

N/A = Not applicableN/T = Not testedAbbreviations:

Table 1

| Table | | | | | | |
|-------|--|-------------|--------|--|--|--|
| 1. | Safety | EN 16139 | Result | | | |
| 1.1 | | 4.1 | Pass | | | |
| | General requirements | | | | | |
| | The seating shall be so designed as to minimise the risk of injury to the user. | | | | | |
| | All accessible parts shall be so designed that physical injury and damage are avoided. | | | | | |
| | This requirement is met when: | | | | | |
| | a) accessible corners are rounded or chamfered; | | | | | |
| | b) the edges of the seat, back rest and arm rests which are in contact with the user when sitting in the chair are rounded or chamfered; | | | | | |
| | c) the edges of handles are rounded or chamfered in the direction of the force applied; | | | | | |
| | d) all other edges are free from burrs and rounded or chamfered; | | | | | |
| | e) the ends of hollow components are closed or capped. | | | | | |
| | 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 seating 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 | | | | | |
| 1.2 | Shear and squeeze points | 4.2 | Pass | | | |
| | With the exception of tipping seats there shall be no shear and squeeze points created by parts of the seating operated by powered mechanisms, e.g. springs and gas lifts. | | | | | |
| | There shall be no shear and squeeze points created by forces applied during normal use as well as during normal movements and actions | | | | | |
| | Note! Shear and squeeze points that are created only during manually setting up and folding 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. | | | | | |





| 2. | Stability | EN 1022 | Result |
|-----|--|---------|--------|
| 2.1 | Forwards overbalancing | 6.2 | Pass |
| 2.2 | Forwards overturning for seating with footrest | 6.3 | N/A |
| 2.3 | Sideways overbalancing, all seating without arms | 6.4 | Pass |
| 2.4 | Sideways overbalancing, all seating with arms | 6.5 | N/A |
| 2.5 | Rearwards overbalancing, all seating with backs | 6.6 | Pass |

Table 3

| 3. | Strength, durability | Reference EN 1728 | Cycles | EN 16139 level 1 | Result |
|-------------------|--|----------------------|--------|---------------------------------|--------|
| 3.1 | Seat and back static load test | 6.4 | 10 | Seat: 2x1600 N Back: 2x560 N | Pass |
| 3.2 | Seat front edge static load test | 6.5 | 10 | 2x1300 N | Pass |
| 3.3 | Vertical static load on back rests | 6.6 | 10 | 2x600 N Seat: 1300 N | N/A |
| 3.4 | Foot rest and leg rest static load test | 6.8 and 6.9 | 10 | 1300 N | N/A |
| 3.5 | Arm sideways static load test | 6.10 | 10 | 400 N | N/A |
| 3.6 | Arm downwards static load test | 6.11 | 5 | 750 N | N/A |
| 3.7 | Vertical upwards static load on arm rests for stackable seating | 6.13.2 | 10 | 250 N | N/A |
| 3.7 Annex B | Vertical upwards static load on arm rests for seating which may be moved when occupied | 6.13.1 | 10 | 1200 N | N/A |



| 3. | Strength, durability | Reference EN 1728 | Cycles | EN 16139 level 1 | Result |
|------|--|----------------------|---------|---------------------|--------|
| 3.8 | Seat and back durability test | 6.17 | 100 000 | Seat: 2x1000N | Pass |
| | | | | Back: 2x300 N | |
| 3.9 | Seat front edge durability test | 6.18 | 50 000 | 800 N | Pass |
| 3.10 | Arm durability test | 6.20 | 30 000 | 400 N | N/A |
| 3.11 | Foot rest durability test | 6.21 | 50 000 | 1000 N | N/A |
| 3.12 | Leg forward static load test | 6.15 | 10 | 500 N | N/A |
| | | | | Seat: 1000 N | |
| 3.13 | Leg sideways static load test | 6.16 | 10 | 400 N | N/A |
| | | | | Seat: 1000 N | |
| 3.14 | Seat impact test | 6.24 | 10x2 | 240 mm | Pass |
| 3.15 | Back impact test | 6.25 | 10x2 | 210 mm/38° | Pass |
| 3.16 | Arm impact test | 6.26 | 10 | 210 mm/38° | N/A |
| 3.17 | Auxiliary writing surface static load test | 6.14 | 10 | 300 N | N/A |
| 3.18 | Auxiliary writing surface durability test | 6.22 | 10 000 | 150 N | N/A |



Appendix 2

Description of test Object

Test object/ID Sofa/The Hut

Dimensions

Width: 176 cm
Depth: 56 cm
Height: 147 cm
Seat height: 51 cm
Mass: 57 kg

Components

Frame: Wood based
Upholstery: Polyester, fabric

Sampling: The test object was selected by the customer

Date of arrival at 2017-03-24

RISE test laboratory:

Observed defects before testing: No defects

Appendix 3





Figure 1 Figure 2



Figure 3 Figure 4