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Testing of seating furniture according to EN 16139:2013 (3 appendices)

Customer:	Lectus Produktion AB
Test object /ID:	Folding stool/Stockholm II
Test method:	EN 16139:2013 Furniture - Strength, durability and safety - Requirements for non-domestic seating. Test level 1
Scope:	Complete test, except for armrests
Date of test:	2016-03-09 – 2016-04-18
Test result:	The tested object passed the test as far as tested
Reservation:	The test results in this report apply only to the particular Equipment Under Test (EUT)
Test environment:	23 ± 2°C and 50 ± 5% relative humidity
Additional information:	-

SP Technical Research Institute of Sweden Sustainable Built Environment - 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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Appendix 1

Test result

Abbreviations: N/A = Not applicable
N/T = Not tested

Table 1

1.	Safety	EN 16139	Result
1.1	<p><u>General requirements</u></p> <p>The seating shall be so designed as to minimise the risk of injury to the user.</p> <p>All accessible parts shall be so designed that physical injury and damage are avoided.</p> <p>This requirement is met when:</p> <ul style="list-style-type: none"> 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. <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>	4.1	Pass
1.2	<p><u>Shear and squeeze points</u></p> <p>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.</p> <p>There shall be no shear and squeeze points created by forces applied during normal use as well as during normal movements and actions</p> <p>Note!</p> <p>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.</p>	4.2	Pass

Appendix 1

Table 2

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/T
2.5	Rearwards overbalancing, all seating with backs	6.6	N/A

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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 N/A
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/T
3.6	Arm downwards static load test	6.11	5	750 N	N/T
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

Appendix 1

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 Back: 2x300 N	Pass N/A
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/T
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 Seat: 1000 N	Pass ¹
3.13	Leg sideways static load test	6.16	10	400 N Seat: 1000 N	Pass ²
3.14	Seat impact test	6.24	10x2	240 mm	Pass
3.15	Vertical seat impact test	6.25	10	210 mm/38°	Pass
3.16	Arm impact test	6.26	10	210 mm/38°	N/T
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

¹ The vertical force is reduced to 395 N in accordance with the standard to prevent the stool from overturning during test

² The vertical force is reduced to 325 N in accordance with the standard to prevent the stool from being folded during test

Appendix 2

Description of test Object

Test object/ID: Folding stool/Stockholm II

Dimensions

Width: 630 mm
Depth: 375 mm
Height: 700 mm
Seat height: 510 mm unloaded
Mass: 1.8 kg

Components

Frame/legs: Metal tube Ø20 mm
Seat: Fabric

Sampling: The test object was selected by the customer
Date of arrival at
SP test laboratory: 2016-02-17
Observed defects before testing: No defects

Appendix 3

Pictures



Figure 1



Figure 2



Figure 3



Figure 4