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Testing of Fenix couch

(1 appendix)

Summary

Fenix couch meet the requirements for strength and security according to EN 15373:2007, level 2.

1 Introduction

On behalf of Jonas Ihreborn Produktion AB, a Fenix couch has been tested at SP in accordance with EN 15373:2007 Furniture - Strength, durability and safety - Requirements for non-domestic seating, level 2.

2 Test specimen

Figure 1 Fenix couch

Dimension:	W=2420 mm, D=900 mm, H=660 mm.
Seat height:	307 mm.
Frame:	Solid wood.
Seat:	Cushions are filled with polyether and has coil springs.
Back rest:	MDF boards, cushions are filled with polyether and feathers.
Arm rest:	MDF boards.
Leg:	5 legs in solid wood, 45 x 45 mm. See figure 1 in appendix 1.
Other info:	The furniture has been tested as a 4-seated couch.

The test specimen was selected by the customer and arrived at SP 2013-01-10.

3 Test methods and test procedure

The test was carried out according to EN 15373:2007 Furniture – Strength, durability and safety – Requirements for non-domestic seating, level 2 and EN 1022 Domestic furniture – Seating – Determination of stability. The test was carried out in a climate of 23±2ºC and 50 ±5% relative humidity.
The test methods are explained in table 1 – 3.

The test was carried out 2013-01-11 – 2013-01-24.

4 Results

Table 1

1.	General requirements	EN 15373	Results
1.1	Components or parts accessible during normal use shall have no burrs, sharp edges or sharp points.	5.1	Passed
1.2	There shall be no open-ended tubes.	5.1	N/a
1.3	Movable and adjustable parts shall be designed so that injuries and inadvertent operation are avoided.	5.1	N/a
1.4	Load bearing part of the seating shall not be possible to come loose unintentionally.	5.1	Passed
1.5	All parts that are lubricated to assist sliding shall be designed to protect users from lubricant stains when in normal use.	5.1	N/a
1.6	Shear and squeeze points exist if the distance between two accessible parts moving relative to each other can be less than 18 mm or more than 7 mm in any position during movement.	5.2.1 3.3	N/a
1.7	There shall be no shear and squeeze points created by parts of the seating operated by powered mechanisms, e.g. springs and gas lifts.	5.2.2	N/a
1.8	There shall be no shear and squeeze points 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.	5.2.3	Passed

Table 2

2.	Stability	EN 1022	Results
2.1	Forwards overbalancing.	6.2	Passed
2.2	Forwards overturning for seating with footrest.	6.3	N/a
2.3	Sideways overbalancing, all seating without arms.	6.4	Passed
2.4	Sideways overbalancing, all seating with arms.	6.5	Passed
2.5	Rearwards overbalancing, all seating with backs.	6.6	Passed

Table 3

3.	Strength, durability	Reference EN 1728	Cycles	EN 15373 level 2	Results
3.1	Seat and back static load test.	6.2.1	10	Seat: 1600 N Back: 560 N	Passed
3.2	Seat front edge static load test.	6.2.2	10	1600 N	Passed
3.3	Additional seat and back static load test for tilting chairs, reclining chairs and loungers.	6.3		Loads according to formulas in SS-EN 1728	N/a
3.4	Vertical static load on back.	*EN 15373 Annex A2*	10	Back: 600 N Seat: 1300 N	Passed
3.5	Foot rail/foot rest and leg rest static load test.	6.4	10	1300 N	N/a
3.6	Arm sideways static load test.	6.5	10	600 N	Passed
3.7	Wing sideways static load test.	6.5	10	400 N	N/a
3.8	Arm downwards static load test.	6.6	10	900 N	Passed
3.9	Vertical upwards static load on armrest.	*EN 15373 Annex A1*	10		N/a
3.10	Seat and back fatigue test.	6.7	100 000	Seat: 1000N Back: 300N	Passed
3.11	Additional seat and back fatigue test for tilting chairs, reclining chairs and loungers.	6.9	100 000	Loads according to formulas in SS-EN 1728	N/a
3.12	Seat front edge fatigue test.	6.8	50 000	1000 N	Passed
3.13	Arm fatigue test.	6.10	50 000	400 N	Passed
3.14	Leg rest fatigue test.	6.11	50 000	1000 N	N/a
3.15	Foot rail fatigue test.	*EN 15373 Annex A2*	50 000	1000 N	N/a
3.16	Leg forward static load test.	6.12	10	Seat: 1300N Under frame: 500N	Passed
3.17	Leg sideways static load test.	6.13	10	Seat: 1300N Under frame: 490N	Passed
3.18	Diagonal static base load test.	6.14	10	500 N	N/a
3.19	Seat impact test.	6.15	10	Drop height 240 mm	Passed

3.	Strength, durability	Reference EN 1728	Cycles	EN 15373 level 2	Results
3.20	Back impact test.	6.16	10	Drop height 330 mm	Passed
3.21	Arm impact test.	6.17	10	Drop height 330 mm	Passed
3.22	Drop test (multiple seating).	6.18	2x5	Drop height 300 mm	Passed
3.23	Auxiliary writing surface static load test.	*EN 15373 Annex A3*	10	300 N	N/a
3.24	Auxiliary writing surface fatigue test.	*EN 15373 Annex A3*	20 000	150 N	N/a

5 Conclusion

At the end of the test, the tested piece did not exhibit any faults, fractures or other damage judged to affect its safety and functions when used in accordance with EN 15373:2007 level 2.

The test results apply solely to the specimen tested.

SP Technical Research Institute of Sweden
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Performed by

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Examined by

Bengt-Åke Andersson

Appendix

1. Pictures (1 pages)

Appendix 1

Pictures

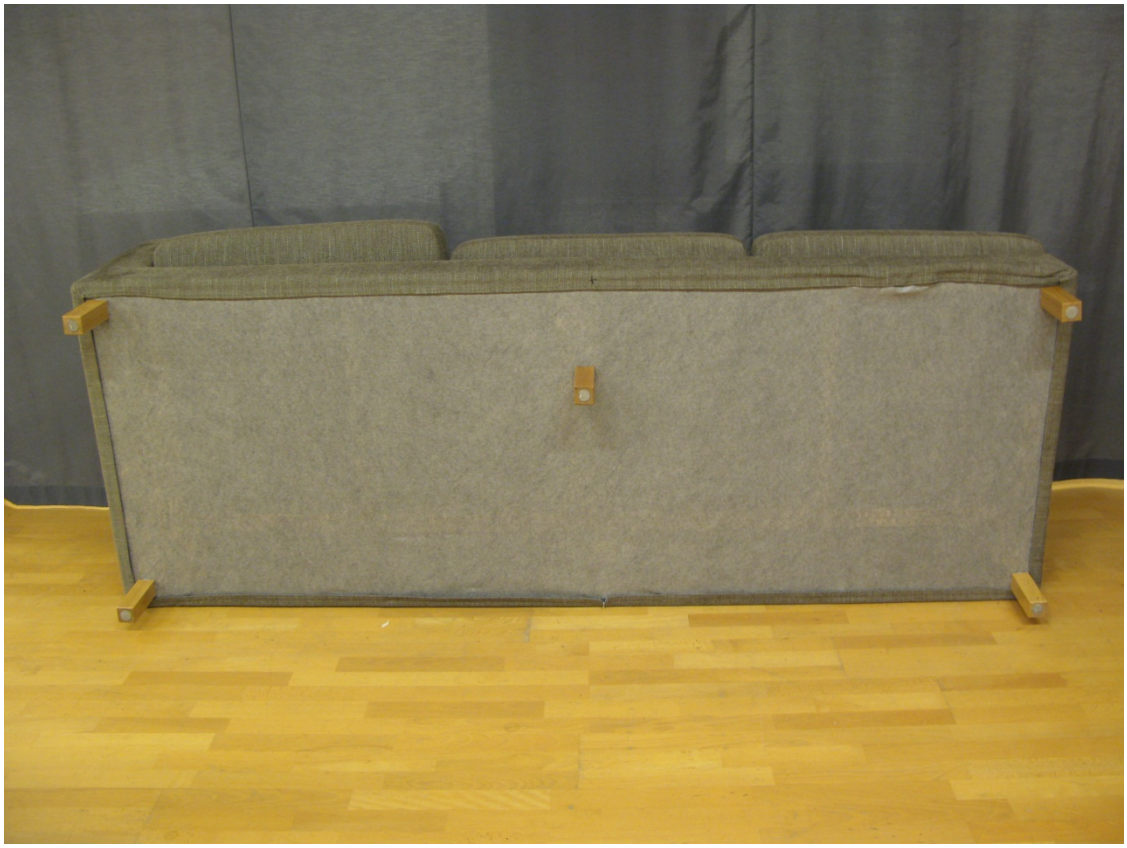

Figure 1 Fenix couch, underside