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Norway

Fürth, November 30/2021

TEST REPORT No. FUHLFP2021-09983R1

Date sample received: November 11/2021
Period of testing: November 11/2021 – November 30/2021
Technical Director: Kerstin Scharrer

Test Item: Chair model name RBM ANA

4340 4340S 4340SR

Test: General safety tests to EN 16139

Determination:

Essential components of the tests were the safety, functionality, fitness-for-use and ergonomic properties. Basis of the tests were the following references: EN 16139:2013 + AC:2013 (Level 1) considering the current state of the art of technique.

The reference model “4340” was tested standing in for the complete model range.

In summary, the test requirements **were fulfilled**.

Reviewed by:
Intertek Consumer Goods GmbH



Lab Manager Hardlines
Frank Urbich

Tested by:
Intertek Consumer Goods GmbH



Technical Expert
Tobias Reißmann

Product identification:

Test sample:	Chair
Model name:	RBM Ana
Item number:	4340, 4340S, 4340SR
Manufacturer:	Flokk AS, Vallatan 1,57123 Nässjö, Sweden
Number of test samples:	1 sample 4340
Distributor:	Flokk
Delivered on:	30.11.2021
Delivered by:	Flokk

Product documents:

User Guide, Product specification sheet and Product marking

Scope of the investigations:

EN 16139:2013 + AC:2013, Office furniture - Office work chair –

Test Methods:

EN 1728:2012,

EN 1022:2018

Abbreviations:

*	=	Test method is not part of the accreditation scope
**	=	Outsourcing
n.a.	=	not applicable
n.t.	=	not tested
n.d.	=	not determin.a.ble (< LoQ)
LoQ	=	limit of quantification
CS	=	Combined sample
P	=	passed
F	=	failed

Applicability of measurements:

The test results refer only to the objects to be tested. The digital images in this report are intended as supplementary information and are not an integral part of this test report.

Test equipment list

The test equipment list contains a list of the measuring tools used and measuring equipment, gauges, templates and load weights that were used in accordance with the scope of the investigations.

Testing machines and devices as well as any connections that are necessary for the performance of tests are not an integral part of the test equipment list.

The following test equipment were available for testing in accordance with the scope of the investigations:

Clause	Test equipment	Equipment no.
General tests	Ruler	PM_HL_18.321
General tests	Band ruler 3000 mm	PM_HL_18.367
General tests	Calliper	PM_HL_17.044
Strength and durability tests	Load cell 5 kN	PM_HL_18.358
Strength and durability tests	Load cell 5kN	PM_HL_18.359
Strength and durability tests	Load cell 5kN	PM_HL_18.360
Strength and durability tests	Load cell 5 kN	PM_HL_18.361
Strength and durability tests	Load cell 2 kN	PM_HL_18.362
Strength and durability tests	Load cell 5,5 kN	PM_HL_18.363
Strength and durability tests	Seat dummy	PM_HL_18.199
Stability	Pull-Push-Gauge	PM_HL_17.026
Stability	Stability Table	PM_HL_18.107
Stability	Load disc 10 Kg	PM_HL_18.231
Stability	Load disc 10 Kg	PM_HL_18.232
Stability	Load disc 10 Kg	PM_HL_18.233
Stability	Load disc 10 Kg	PM_HL_18.234
Stability	Load disc 10 Kg	PM_HL_18.235
Loading point template - A-B	Measurement template	PM_HL_18.109
Strength and durability tests	Durability test stand	PM_HL_18.153
Strength and durability tests for castor	Linear axis test stand	PM_HL_18.066

General Testing

Technical characteristics

Model	4340
Depth (mm):	515
Height (mm):	825
Width (mm):	490
Net weight (kg):	3.7

Product description:

Chair with 4 Legs and Backrest

Stackable up to 12 chairs without upholstery (height: 1.83 m)
and 10 chairs with upholstery (height: 1.65 m)

Accessories/options

- Writing tablet in 12 mm beech or birch veneer
- Linking device, welded (black, alu-lacquer or chrome)
- Plastic linking device, black, detachable
- Felt glides
- Chair trolley with wheels

Material:

Polypropylene (PP) shell in various colours. Graphite colour in recycled PP;

Frame made of 19 x 1.5 mm 4 leg tubular steel frame

Photo documentation – mod. 4340



Test method/Requirements	Test parameter/Results	Verdict
<p>Strength, durability and safety according to EN 16139:2013 + AC:2013, Level 1</p> <p>Safety</p> <p>The seating shall be so designed, that the injury risk of the user is minimized.</p> <p>All accessible components shall be so designed, that a physical injury and other hazards are avoided.</p> <p>This requirement is fulfilled, if:</p> <p>a) all accessible corners are rounded or chamfered; b) the edges of the seat, back and armrest which the user is in contact with during sitting, are rounded or chamfered; c) the edges of the handles in direction of the application are rounded or chamfered; d) all other edges are free of burrs, rounded or chamfered e) ends of hollow tubulars are covered or capped</p> <p>Movable and adjustable components are so designed, that injuries and unintended operation are avoided.</p> <p>No load bearing component of the seating shall get loosened which is intended to be rigid.</p> <p>All components, which are lubricated for a better gliding, shall be so designed, that the user is protected against soiling during intended use.</p> <p>Stability</p> <p>The seating shall not overturn under the following conditions:</p> <p>a) by pressing down on the front edge of the seat surface in the median plane; b) by applying a load on the seat surface via the front corner; c) by leaning sideways on an item of seating with or without arm rests; d) by leaning against the back rest; e) by sitting on the front edge of the seat; f) by loading the foot rest.</p> <p>The requirement is considered to be met if the seating complies with EN 1022:2018.</p>	<p>Requirements fulfilled</p> <p>All accessible corners are rounded and chamfered</p> <p>No handles</p> <p>No burrs</p> <p>No open hollow tubulars components</p> <p>No loosened load bearing components</p> <p>Protected against soiling</p> <p>Requirements fulfilled</p> <p>No overturn</p> <p>No overturn</p> <p>No overturn</p> <p>No overturn</p> <p>No overturn</p> <p>No overturn</p>	<p>P</p> <p>n.a.</p> <p>P</p> <p>n.a.</p> <p>P</p> <p>P</p> <p>P</p> <p>P</p> <p>P</p> <p>P</p> <p>P</p> <p>P</p> <p>P</p> <p>P</p> <p>P</p>

Test method/Requirements	Test parameter/Results	Verdict
<p>Safety of the construction</p> <p>The following tests described in Table 1 are considered to be relevant to safety: Test No.: 1, 2, 4, 6, 7, 8, 9, 10, 12, 13, 14. Seating is considered to satisfy the safety requirements if, on completion of the relevant tests, the chair satisfies all requirements.</p> <p>Safety, strength and durability requirements</p> <p>The chair shall be constructed to ensure that it does not create a risk of injury to the user of the chair under the following conditions:</p> <ul style="list-style-type: none"> - sitting on the seat, both centrally and off-centre; - moving forward, backwards, and sideways while sitting in the chair; - leaning over the arm rests; - pressing down on the arm rests while getting up from the chair. <p>These safety, strength and durability requirements are fulfilled when during and after testing in accordance with Table:</p> <ul style="list-style-type: none"> a) there are no fractures of any member, joint or component; b) there are no loosening of joints intended to be rigid; c) no major structural element is significantly deformed; d) the chair fulfils its functions after removal of the test loads. <p>The stability requirements are fulfilled when after testing in accordance with Table 1 the seating does not overturn.</p>	<p>Requirements fulfilled</p> <p>See table 1</p> <p>Requirements fulfilled</p> <p>See table 1</p> <p>no fracture</p> <p>no loosening</p> <p>no significant deformation</p> <p>full functioning</p> <p>no overturn after testing</p>	<p></p> <p></p> <p></p> <p>P</p> <p>P</p> <p>P</p> <p>P</p> <p>P</p>

Table 1: Safety, strength and durability tests

Test and sequence	Reference	Loading ^a	Level	Result
			L1	Level1
1.Seat and back static load test	EN 1728:2012, 6.4	Seat: Force, N Back: Force, N; 10 times	1600 560(min force 410)	P
2.Seat front edge static load test	EN 1728:2012, 6.5	Force, N 10 times	1300	P
3.Vertical static load on back ^b	EN 1728:2012, 6.6	Force, N Seat load, N, 10 times	600 1300	n.a.
4.Foot rest and leg rest static load test	EN 1728:2012, 6.8, 6.9	Force, N 10 times	1300	n.a.
5.Arm sideways static load test	EN 1728:2012, 6.10	Force, N 10 times	400	n.a.
6.Arm downwards static load test	EN 1728:2012, 6.11	Force, N 5 times	750	n.a.
7.Vertical upwards static load on arm rests	EN 1728:2012, 6.13.1, 6.13.2	Seat load, N Lift 10 times, during ≥10 s	250 or lift stack with max. 8 chairs of max 25kg	n.a.
8.Seat and back durability test	EN 1728:2012, 6.17	Cycles Seat: 1000N; Back ^c : 300N	100 000	P
9.Seat front edge durability test	EN 1728:2012, 6.18	Cycles Force: 800N	50 000	P
10. Arm durability test	EN 1728:2012, 6.20	Cycles Force: 400N	30 000	n.a.
11. Foot rest durability test	EN 1728:2012, 6.21	Cycles Force: 1000N	50 000	n.a.
12. Leg forward static load test	EN 1728:2012, 6.15	Force, N Seat load, N; 10 times	500 1000	P
13. Leg sideways static load test	EN 1728:2012, 6.16	Force, N Seat load, N; 10 times	400 1000	P
14.Seat impact test	EN 1728:2012, 6.24	Drop height, mm 10 times	240	P
15.Back impact test	EN 1728:2012, 6.25	Height of fall, mm/° 10 times	210/38	P
16. Arm impact test	EN 1728:2012, 6.26	Height of fall, mm/° 10 times	210/38	n.a.
17. Drop test (multiple seating)	EN 1728:2012, 6.27.1	Drop height, mm 2x5 times	N/A	n.a.
18.Auxiliary writing surface static load test	EN 1728:2012, 6.14	Force, N 10 times	300	n.a.
19. Auxiliary writing surface durability test	EN 1728:2012, 6.22	Cycles Force: 150N	10 000	n.a.

^a Seat load on parts not undergoing test: 750N
^b The test is only applicable for chairs without head/neck rest and for chairs with a height of the backrest <1000mm above ground
^c No minimum force defined

Test	EN 1728	Loading	Level 1	Verdict
Drop test for stacking seating	6.27.1	Drop height	10 times of 210 mm	P
Backward fall test	6.28	cycles	5	P
Drop test from the height of a table	6.27.3	Front leg:	5 times with 600 mm	P
		Rear leg:	5 times with 600 mm	P

Table 2: Measurement table according to ANNEX C

Measurement range	Symbol						Measured value	Verdict
		allowed (-)	Min.	Max.	allowed (+)	Min. range		
Seat height and sitting height fixed	a	no	400	500	no	/	430 mm	P
Seat height and sitting height adjustable		yes	420	480	yes	/	/	n.a.
depth of the seat	b	yes	380	470	yes	/	444 mm	P
Seat pad width	d	no	400	-	yes	/	490 mm	P
Distance between arm rests	r	no	460	-	yes	/	/	n.a.

Table 3: Loads, Masses and Cycles of stability tests

Test description	Loads	Result	Cycles	Verdict
Overturning over the front corner	M ₁ = 30 kg	300 N	1	P
Overturning over the front edge	F ₁ = 600 N F ₂ = 20 N	F ₂ = 66 N	1	P
Overturning over the front edge for seating with footrest	F ₁ = 600 N F ₂ = 20 N	--	1	n.a.
Overturning over the side edge for seating without armrests	F ₁ = 600 N F ₂ = 20 N	F ₂ = 94 N	1	P
Overturning over the side edge for seating with armrests	F ₁ = 250 N F ₂ = 350 N F ₃ = 20 N	--	1	n.a.
Overturning backwards for seating with backrest inclination	F ₁ = 600 N F ₂ = If seating Height < 720 mm (0,2857 * (1 000 - Seating height in mm If seating height > 720 mm F ₂ = 80 N	F ₂ = 163 N	1	P
tilting backrest	13 load discs	13 load discs	1	n.a.

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