Intertek Consumer Goods GmbH · Würzburger Straße 152 · 90766 Fürth · Germany

Flokk AS
Fridtjof Nansens vei 12,
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0301 Oslo
Norway

Fürth, 2019-02-27

Test report no. FUHLFP2019-00096
Receipt of sample: 2019-01-07; period of investigation: 2019-01-07 – 2019-02-27

Technical laboratory management: Kerstin Scharrer / Hardlines Laboratory: Frank Urbich

Test item: RBM Noor wooden legs/PP – Item no. 6080

Test Test requirements for ANSI/BIFMA X5.1-2017, Type III

Determination:

Basis of the tests was the ANSI/BIFMA X5.1-2017 and considering the current state of the art of technique.

In summary, the test results **have satisfied** the above requirements.

Notes:

Please refer to the following pages for technical characteristics and results as well as detailed test conditions and requirements.

Reviewed by:

Intertek Consumer Goods GmbH

Stellvert. Leitung Mechanik / Dep. Manager Hardlines
Thomas Rissmann

Tested by:

Intertek Consumer Goods GmbH

Sachverständiger / Technical Expert
Anh Vu Nguyen

Product identification:

Test sample:	Office chair
Model name:	RBM Noor wooden legs/PP
Item number:	6080
Manufacturer:	Flokk AB Vallgatan 1 S-572 23 Nässjö
Number of test samples:	1 sample
Distributor:	Flokk AS
Serial number:	--
Distributor‘s PO number:	0002438534
Delivered on:	2019-01-07
Delivered by:	Flokk AS

Product documents:

User guide booklet

Scope of the investigations:

ANSI/BIFMA X5.1-2017, General-Purpose Office Chairs – Tests

Key to findings

P =	passed
F =	failed
n.a. =	not applicable

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.

Measurement uncertainty:

Unless otherwise indicated, all measured dimensions are accurate in accordance with DIN ISO 2768 part 1 "c".
For all other physical measurement values, the uncertainty range is < 5 %. Testing was done in standard climate conditions of 23°C / 50% relative humidity.

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	Digital scale 150 kg	PM_HL_18.314
General tests	Steel ruler 500 mm	PM_HL_19.328
General tests	Band ruler 3.000 mm	PM_HL_18.390
General tests	Digital calliper	PM_HL_17.044
Loading tests	Dynanometer 1.000 N	PM_HL_17.026
Strength test	Pressure force-measuring cell 5 kN	PM_HL_18.358
Strength test	Pressure force-measuring cell 5 kN	PM_HL_18.359
Strength test	Pressure force-measuring cell 5 kN	PM_HL_18.360
Strength test	Pressure force-measuring cell 5 kN	PM_HL_18.361
Strength test	Dummy	PM_HL_18.028
Strength test	Dummy	PM_HL_18.074
Strength test	Dummy	PM_HL_18.097
Strength test	Dummy	PM_HL_18.096
Strength test	Weight bag 10 x a’ 10 kg	PM_HL_18.062
Strength test	Weight bag 10 x a’ 1 kg	PM_HL_18.064
Strength test	ANSI/BIFMA bag	PM_HL_18.159
Strength test	Digital timer	PM_HL_17.375
Strength test	Loading disc 10 kg	PM_HL_18.230
Strength test	Loading disc 10 kg	PM_HL_18.231
Strength test	Loading disc 10 kg	PM_HL_18.232
Strength test	Loading disc 10 kg	PM_HL_18.233
Strength test	Loading disc 10 kg	PM_HL_18.234
Strength test	Loading disc 10 kg	PM_HL_18.235
Strength test	Loading disc 10 kg	PM_HL_18.236
Strength test	Loading disc 10 kg	PM_HL_18.237
Strength test	Loading disc 10 kg	PM_HL_18.238
Strength test	Loading disc 10 kg	PM_HL_18.239
Strength test	Loading disc 10 kg	PM_HL_18.240
Strength test	Loading disc 10 kg	PM_HL_18.241
Strength test	Loading disc 10 kg	PM_HL_18.242

General Testing

Technical characteristics

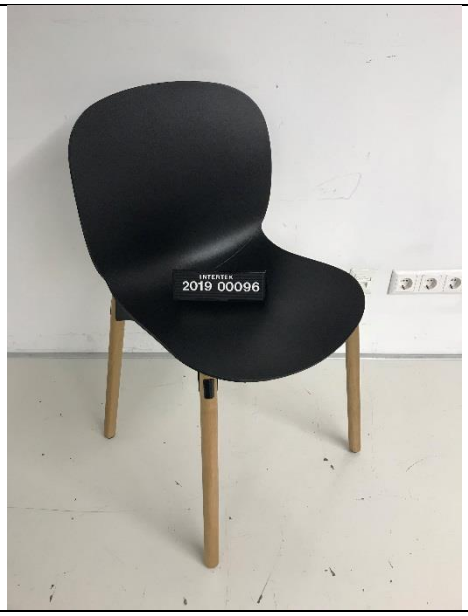
General dimensions (measurements in mm)

Width	477
Depth	488
Height	834
Net weight	5.47 kg

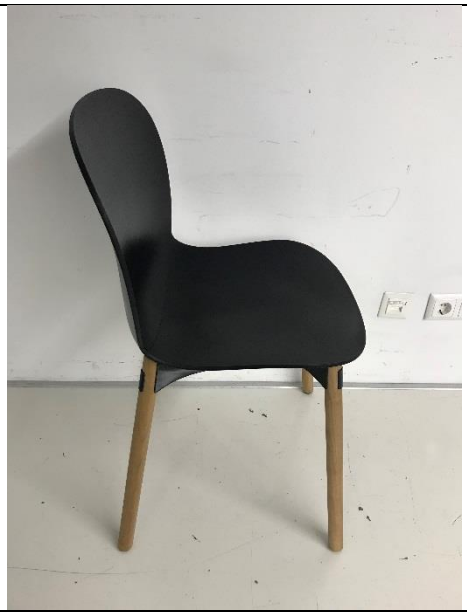
Product description

4-leg chair with seat and back shell of one piece;
Legs of solid wood

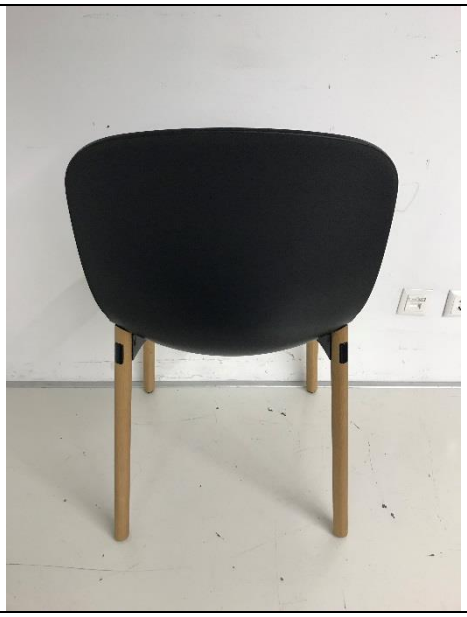
Product pictures:



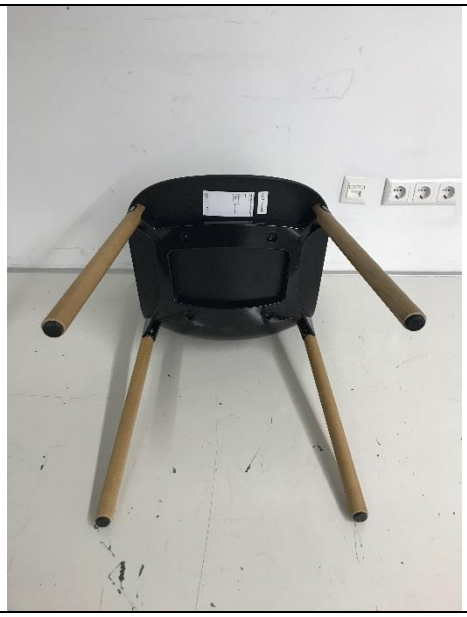
Pic.1: Total view



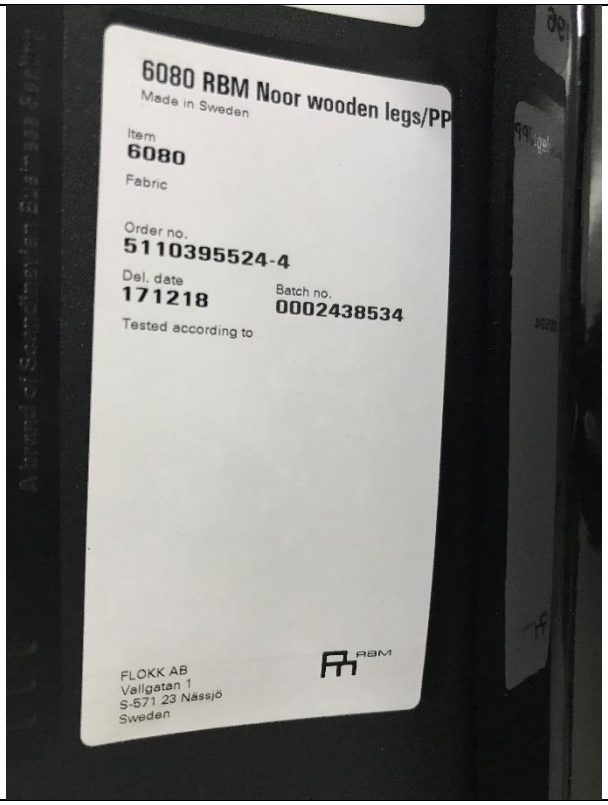
Pic.2: Side view



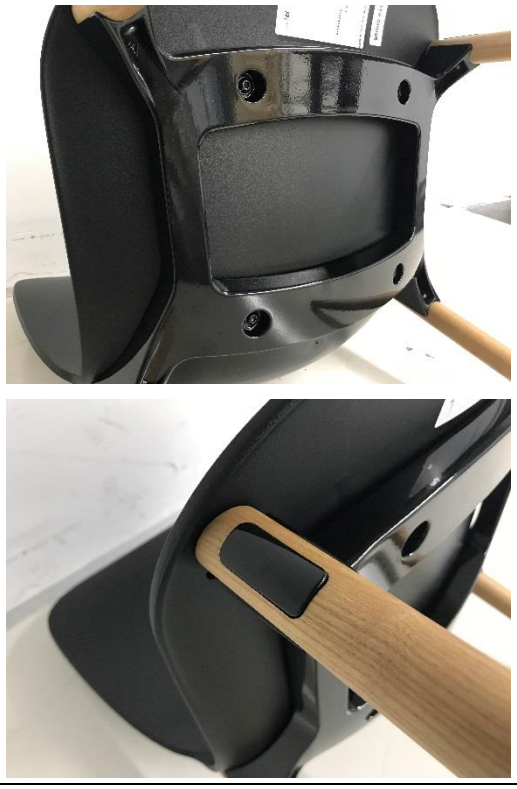
Pic.3: Back view



Pic.4: Bottom view



Pic.5: Product marking



Pic.6: Seat base and leg connection

Table 1 – Test Guide by Chair Type

Section Number	ANSI/BIFMA X5.1 Clause	Type I	Type II	Type III
5	Backrest Strength Test – Static – Type I and II	X	X	
6	Backrest Strength Test – Static – Type III			X
7	Drop Test – Dynamic	X	X	X
8	Swivel Test – Cyclic	X	X	X
9	Tilt Mechanism Test – Cyclic	X	X	
10	Seating Durability Test – Cyclic	X	X	X
11	Stability Tests	X	X	X
12	Arm Strength Test – Vertical – Static	X	X	X
13	Arm Strength Test – Horizontal - Static	X	X	X
14	Backrest Durability Test – Cyclic – Type I	X		
15	Backrest Durability Test – Cyclic – Type Ii and Type III		X	X
16	Caster/Chair Base Durability Test - Cyclic	X	X	X
17	Leg Strength Test – Front and Side Application	X	X	X
18	Footrest Static Load Test - Vertical	X	X	X
19	Footrest Durability Test – Vertical Cyclic	X	X	X
20	Arm Durability Test – Cyclic	X	X	X
21	Out Stop Test for Chair with Manually Adjustable	X	X	X
22	Tablet Arm Chair Static Load Test	X	X	X
23	Tablet Arm Chair Load Ease Test – Cyclic	X	X	X
24	Structural Durability Test – Cyclic	X	X	X

Technical testing

Test description	ANSI/BIFMA X5.1 Clause	Load	Requirement	Results
Backrest Strength Test - Static - Type I and II	5	Functional load: 667 N Proof load: 1001 N	There shall be no loss of serviceability to the chair.	n.a. (Type III)
Backrest Strength Test - Static - Type III	6	Functional load: 667 N Proof load: 1001 N	No loss of serviceability to the chair.	P
Drop Test - Dynamic	7	Functional load bag: 102 kg Proof load bag: 136 kg Drop height: 152 mm	No loss of serviceability.	P
Swivel Test - Cyclic	8	Seat load: 122 kg Rotate 60.000 cycles	No loss of serviceability to the chair.	n.a. (no swivel chair)
Tilt Mechanism Test - Cyclic	9	Test load: 109 kg Tilting to front and back stops 300.000 cycles	No loss of serviceability to the tilt mechanism.	n.a. (no tilt mechanism)
Seating Durability Tests – Cyclic Impact Test	10.3	Functional load bag: 57 kg Drop height: 36 mm 100.000 cycles	No loss of serviceability to the chair after completion of both the impact and load-ease tests.	P
Seating Durability Tests – Cyclic Front Corner Load-Ease Test – Cyclic – Off-center	10.4	Force: 890 N 20.000 cycles each side		P
Stability Tests – Rear Stability for Type III	11.3.1	Force: F = 0.1964 (1195 – H) N 6 discs	Tipping Force: > 170 N	P
Stability Tests – Rear Stability for Type I or II	11.3.2	Tilted to back stop 13 discs	The chair shall not tip over.	n.a. (Type III)
Front Stability	11.4	Seat load: 61 kg 60 mm from front center Hori. Force: 20 N	The chair did not tip over as the result of the force application. Hori. Force at tipping > 40 N	P
Arm Strength Test – Vertical – Static	12	Func. F: 750 N, 60 s Proof F: 1125 N, 15 s	No loss of serviceability.	n.a. (no armrests)
Arm Strength Test - Horizontal - Static	13	Func. F: 445 N, 60 s Proof F: 667 N, 15 s	No loss of serviceability.	n.a. (no armrests)
Backrest Durability Test - Cyclic - Type I	14	Load weight: 109 kg F: 445 N 120.000 cycles if Back width ≤ 406 mm 80.000 cycles if Back width > 406 mm	There shall be no loss of serviceability.	n.a. (Type III)
Backrest Durability Test - Cyclic - Type II and III	15	Load weight: 109 kg F: 334 N 120.000 cycles if Back width ≤ 406 mm 80.000 cycles if Back width > 406 mm	Back width: 470 mm No loss of serviceability.	P

Title	ANSI/BIFMA X5.1 Clause	Test description	Requirement	Results
Caster/Chair Base Durability Test for Pedestal Base Chairs	16.1	Load: 122 kg 2000 cycles over obstacles 98.000 cycles over smooth surface	No loss of serviceability. No part of the caster did separate from the chair as a result of the application of the 22 N force.	n.a. (no pedestal base)
Caster/Chair Frame Durability Test for Non-pedestal Chairs with Casters	16.2	Load: 122 kg 2000 cycles with obstacles 98.000 cycles smooth surface	No loss of serviceability to the chair.	n.a. (no caster)
Leg Strength Test - Front and Side Application	17	Func. F: 334 N, 60 s Proof F: 503 N, 60 s	No loss of serviceability to the chair.	P
Footrest Static Load Test - Vertical	18	Func. F: 445 N, 60 s Proof F: 1334 N, 60 s	There shall be no loss of serviceability (445 N) or sudden loss of footrest height (1334 N).	n.a. (no footrest)
Footrest Durability Test - Vertical - Cyclic	19	Vert. Force: 890 N 50.000 cycles	There shall be no loss of serviceability. Adjustable footrests that move more than 25 mm during the first 500 cycles shall be considered to have lost their serviceability.	n.a. (no footrest)
Arm Durability Test - Cyclic	20	Inclination 10° degree F: 400 N 60.000 cycles	No loss of serviceability to the chair.	n.a. (no armrests)
Out Stop Tests for Chairs with Manually Adjustable Seat Depth	21	Seat load: 75 kg Pull F: 25 kg 25 cycles	No loss of serviceability to the chair.	n.a. (no seat depth adjustment)
Tablet Arm Chair Static Load Test	22	F: 68 kg, 60 s	No loss of serviceability to the chair.	n.a. (no tablet arm)
Tablet Arm Chair Load Ease Test - Cyclic	23	F: 25 kg 100.000 cycles	No loss of serviceability to the chair.	n.a. (no tablet arm)
Structural Durability Test - Cyclic	24	Seat load: 109 kg F: 334 N 25.000 cycles	No loss of serviceability to the chair.	P

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