

Scandinavian Business Seating AS

Sundveien, N-7374 Røros,
Norway

Fürth, 28.10.2016

Test report no. FUHLFP2016-13576

Receipt of sample: 14.10.2016; period of investigation: 14.10.2016 – 28.10.2016

Technical laboratory management: Kerstin Scharrer / Hardlines Laboratory: Eberhard Klöber

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Test item: "HÅG Capisco Puls" Office work chair
Model "8001" (without backrest) and "8010" (with backrest)

Test EN 61340-5-1:2007
EN 61340-2-3:2000

Determination:

The presented office work chairs "HÅG Capisco Puls", model "8001" and "8010" **have fulfilled** the requirements of the above mentioned standards.

Notes:

This test report only relates to the presented test samples. The tests were sub-contracted to an external accredited laboratory.

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

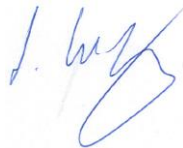
Intertek Consumer Goods GmbH
Hardlines Testing Laboratory

Reviewed by:



Eberhard Klöber
Director – Hardlines

Tested by:



Leopold Walz
Test Ingenieur / BD Manager – Hardlines

Product identification:

Test sample: Office work chair
Model name: "HÅG Capisco Puls 8001"
"HÅG Capisco Puls 8010"
Item number: --
Manufacturer: Scandinavian Business Seating AS
Number of test samples: 1 piece of each chair
Distributor: Scandinavian Business Seating AS
Distributor's item number: ./.
Distributor's PO number: ./.
Delivered on: 14.10.2016
Delivered by: Scandinavian Business Seating AS

Product documents:

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Scope of the investigations:

Measurement of the leakage resistance to a groundable point according to:

- EN 61340-5-1:2007: Protection of electronic devices from electrostatic phenomena; General requirements (IEC 61340-5-1:2007)
- EN 61340-2-3:2000: Electrostatics – Part 2-3: Methods of test for determining the resistance and resistivity of solid planar materials used to avoid electrostatic charge accumulation (IEC 61340-2-3:2000).

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 7168-g and 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.
Measurement of the leakage resistance	High-resistance Tester	ID 08748

General Testing

Technical characteristics

General dimensions (measurements in mm)

N/A

Functional dimensions (measurements in mm)

N/A

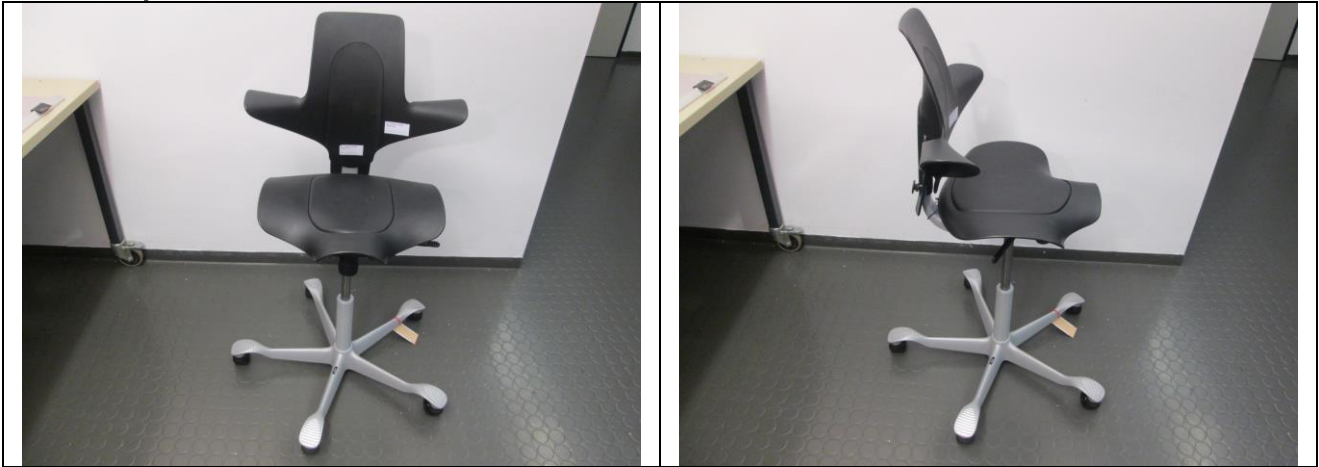
Materials

N/A

Product description

N/A

Product pictures:



Pic.1: Front view of model "8010"

Pic.2: Side view of model "8010"



Pic.3: Front view of model "8001"

Pic.4: Side view of model "8001"

Anmerkung / Note:

Dieser Prüfbericht bezieht sich nur auf die geprüften Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.

This test report relates to the above mentioned test sample. Without permission of the test centre this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products.

Sollte der Inhalt des Untersuchungsberichtes einer Auslegung bedürfen, so ist der deutsche Text maßgebend.

Should the content of the test report need any interpretation the German text shall be leading.

Angaben zur Messunsicherheit sind im Prüflabor vorhanden und können auf Kundenwunsch bereitgestellt werden.

Detailed information regarding measurement uncertainty is available in the test lab and could be shown on customer request.

Dieser Bericht alleine – ohne zugehöriges GS-Zertifikat – berechtigt nicht zur Verwendung des Zeichens "GS-geprüfte Sicherheit".

This test report – unless appended to the accompanying GS-Certificate – does not entitle to use the mark "GS-geprüfte Sicherheit".

Hinweise / Remarks:

Nach EN 61340-5-1 werden Sitzgelegenheiten nach der EN 61340-2-3 geprüft. Die Anforderungen der EN 61340-2-3 wurden ab Seite 7 tabellarisch aufgelistet.

According to EN 61340-5-1 sitting accommodations shall be tested according to EN 61340-2-3. The requirements of EN 61340-2-3 are listed tabularly starting from page 7.

Technical testing

4	CONDITIONING AND TEST CLIMATES		-
	Measurements performed under controlled conditions		P
5	DETERMINATION OF MEASUREMENT METHOD		-
	If the range of the volume resistivity or surface resistance for the material is known, the corresponding section is used, in which the relevant standards are listed or the procedures are described	$R \leq 1 \times 10^{11} \Omega$	P
	for a material with initially unknown resistivity, measurements are to perform using procedures for conductive materials in accordance with section 6		N/A
6	MEASURING THE RESISTANCE OF SOLID CONDUCTIVE MATERIALS		-
	The resistance of solid conductive materials (non-metallic) must be measured in accordance with ISO 3915 for plastics or ISO 1853 for elastomers		N/A
7	MEASURING THE RESISTANCE OF SOLID ELECTRICAL INSULATIONS		-
	The resistance of solid electrical insulations must be measured in accordance with IEC 60093, IEC 60167 for plastics or ISO 2951 for elastomers		N/A
8	MEASURING THE RESISTANCE OF ELECTRICALLY DISSIPATIVE MATERIALS		-
8.1	Measuring instrument		-
	The instrument may consist of a voltage source and an ammeter or an integrated device (resistance-tester)	High-Resistance Tester	P
	If an resistance-tester is used without current detecting setup for resistivity measurements, an additional power meter is necessary to permit at least readings in the range of 10 pA to 10 mA \pm 5%		N/A
	The open circuit voltage must be 100 V \pm 5% for measured values of $1 \times 10^6 \Omega$ and higher, and 10 V \pm 5% for measured values smaller than $1 \times 10^6 \Omega$		P
	Readings must be possible at least from $1 \times 10^3 \Omega$ to $1 \times 10^{13} \Omega$		P
8.2	Electrode assembly		-
	The electrodes must be made of a material that allows good contact with the surface of the test sample and causes no appreciable error by the electrode resistance or contamination of the test sample.		P
8.2.1	Electrode assembly for measurement of the surface resistivity		N/A

8.2.2	Electrode assembly for measurement of the volume resistance		N/A
8.2.3	Electrode assembly for measurement of the resistance to earth, the leakage resistance to a groundable point and the resistance between two surface points		P
8.2.4	The samples must be measured on a smooth flat layer, which must be at least 10 mm longer and wider than the sample body. The minimum thickness is 1 mm.		P
8.3	Preparation and handling of test samples		P
8.4	Establishment for verifying the test setup for the surface resistance		N/A
8.5	Establishment for verifying the test setup for the volume resistance	Measuring probe 1 and 2 not used	N/A
8.6	Measurement methods		-
8.6.1	Measurement of the surface resistance	(See table 8.6.1)	N/A
8.6.2	Measurement of the volume resistance	(See table 8.6.2)	N/A
8.6.3	Measurement of the leakage resistance to a groundable point	(See table 8.6.3)	P
8.6.4	Measurement of the resistance between two surface points	(See table 8.6.4)	N/A

8.6.1	TABLE: Measurement of the surface resistance							N/A
Measuring point	Measured value [Ω]					Mean of measured values [Ω]	Upper Limit [Ω]	Verdict
	1	2	3	4	5			

8.6.2	TABLE: Measurement of the volume resistance							N/A
Measuring point	Measured value [Ω]					Mean of measured values [Ω]	Upper Limit [Ω]	Verdict
	1	2	3	4	5			

8.6.3	TABLE: Measurement of the leakage resistance to a groundable point			P
Measuring point		Measured value [Ω]	Upper Limit [Ω]	Verdict
1A*		9,2 x 10 ⁶	1x10 ¹⁰	P
1B*		9,0 x 10 ⁶	1x10 ¹⁰	P
1C*		9,1 x 10 ⁶	1x10 ¹⁰	P
1D*		8,6 x 10 ⁶	1x10 ¹⁰	P
1E*		8,5 x 10 ⁶	1x10 ¹⁰	P
2A*		8,6 x 10 ⁶	1x10 ¹⁰	P
2B*		10,0 x 10 ⁶	1x10 ¹⁰	P
2C*		8,2 x 10 ⁶	1x10 ¹⁰	P
2D*		8,4 x 10 ⁶	1x10 ¹⁰	P
2E*		8,1 x 10 ⁶	1x10 ¹⁰	P
3A*		8,3 x 10 ⁶	1x10 ¹⁰	P
3B*		8,6 x 10 ⁶	1x10 ¹⁰	P

Anmerkung/ Note:

Siehe Anlage I für die Position der Messpunkte/ See Appendix I for the position of the measuring points

Anlage I: Position der Messpunkte
Appendix I: Position of the measuring points



8.6.3	TABLE: Measurement of the leakage resistance to a groundable point			P
Measuring point		Measured value [Ω]	Upper Limit [Ω]	Verdict
4A*		3,8 x 10 ⁶	1x10 ¹⁰	P
4B*		3,7 x 10 ⁶	1x10 ¹⁰	P
4C*		3,7 x 10 ⁶	1x10 ¹⁰	P
4D*		3,6 x 10 ⁶	1x10 ¹⁰	P
4E*		3,5 x 10 ⁶	1x10 ¹⁰	P
Anmerkung/ Note: Siehe Anlage II für die Position der Messpunkte/ See Appendix II for the position of the measuring points				



- End of test report -