

ENVIRONMENTAL PRODUCT DECLARATION

ISO 14025

Owner of the declaration

Ø[\ AS

Program holder

The Norwegian EPD Foundation

Publisher

The Norwegian EPD Foundation

Declaration number

00042E rev1

Issue date

19.09.2013

Valid to

19.09.2018

HÅG Conventio 9510

Product

Ø[\ AS

Manufacturer

The logo for Folb, consisting of the letters "F", "o", "l", "b" in a bold, green, sans-serif font. The "o" is a solid circle, while the other letters have a unique, stylized design.

HÅG • RH • BMA • OFFECCT • RBM



Meetings and conferences can be extremely static and tiring. They don't have to be any more. HÅG Conventio has been especially designed for meeting and conferences. Its rocking mechanism encourages varied sitting positions and movement. This releases energy and helps keep your mind clear and focused, even during less interesting meetings. HÅG Conventio has great mobility and is well suited as a general purpose chair for conferences schools, universities, libraries, canteens, cafés and hotels.

General information

Håg Conventio 9510

Product

Program holder:

The Norwegian EPD Foundation
 Post Box 5250 Majorstuen, 0303 Oslo
 Phone: +4723088000
 e-mail: post@epd-norge.no

Declaration number:

00042E rev1

This declaration is based on Product Category Rules:

PCR for Seating Solution, NPCR 003 extended version 2008

Declared unit:

Produced seating solution

Declared unit with option:

Functional unit:

Production of one seating solution provided and maintained for a period of 15 years.

The environmental product declaration has been

worked out by:

Østfoldforskning AS



Verification:

Independent verification of data and other environmental information has been carried out in accordance with

externally

internally

Ingunn Saur Modahl

(Independent verifier approved by EPD Norway)

Østfold AS

Manufacturer

Owner of the declaration:

Østfold AS

Contact person:

Phone: +47 22 59 59 00

e-mail:

post@epd-norge.no

Place of production:

7366 Røros, Norway

Management system:

ISO 14001, Certificate No.2010-SKM-AR-1487 from the Accredited Unit: DNV Certification AB, Sweden.

Org. No:

928902749

Issue date:

19.09.2013

Valid to:

19.09.2018

Comparability:

EPD from other program holder than the Norwegian EPD Foundation may not be comparable

Year of study:

2013

Approved according to ISO14025, 8.1.4

Sverre Fossdal

(Chairman of the Verification Group of EPD-Norway)

Functional unit:

Production of one seating solution provided and maintained for a period of 15 years.

Key environmental indicators	Unit	Cradle to gate A1 - A3
Global warming	kg CO ₂ eqv	26
Total energy use	MJ	396
Substances from the REACH Candidate list	*	
Amount of recycled materials	%	29 %

* The product contains no substances from the REACH Candidate list or the Norwegian priority list

Product

Product description:

The seat and front part of the backrest of the HÅG Conventio 9510 are partially upholstered. The rear of the backrest is plastic. Removable seat and back covers.

Recessed handle in the back for lifting. Aluminium legs are available in either black or silver. Armrests are optional. The chair is lightweight and stackable up to 15 high. The tilt of the chair is from +12° to -11°

Technical data:

Total weight: 5,4 kg (6,4 kg with packaging)

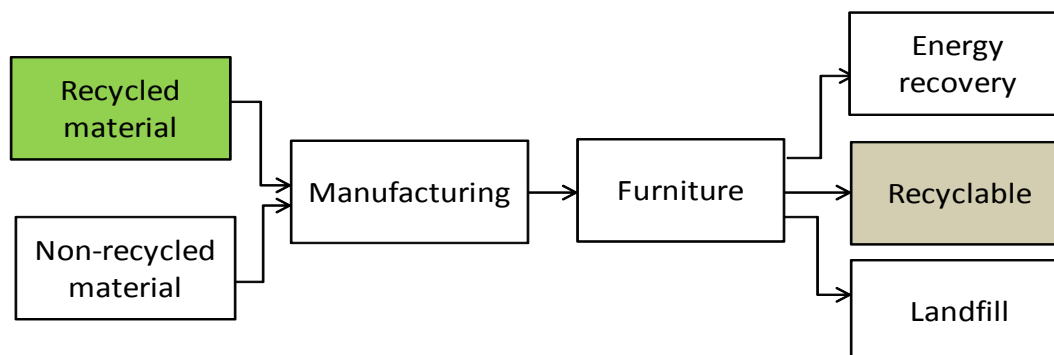
Market:

Europe and U.S.A.

Reference service life:

15 years

Materials	kg	%
Steel 1	0,1	1,2
Steel 2	0,0	0,7
Aluminium	1,0	19,1
Polypropylene	0,8	15,0
Polyurethane	0,7	14,0
Other plastic	2,5	46,2
Textile	0,2	3,7
Not included	0,0	0,2
Total product	5,4	100,0
Cardboard (packaging)	1,1	
Total product and packaging	6,4	-



Materials	Recycled share for each material	Recycled amount	Recycled share in product	Recyclable share for each material	Recyclable amount	Recyclable share in product
	%	kg	%	%	kg	%
Unit						
Steel 1	0 %	0,0	0 %	100 %	0,3	5 %
Steel 2	99 %	0,0	1 %	100 %	0,0	1 %
Aluminium	30 %	0,3	6 %	100 %	1,0	19 %
Polypropylene	100 %	0,8	15 %	100 %	0,8	15 %
Polyurethane	0 %	0,0	0 %	0 %	0,0	0 %
Other plastic	0 %	0,0	0 %	100 %	2,5	46 %
Textile	100 %	0,2	4 %	100 %	0,2	4 %
Not included	0 %	0,0	0 %	100 %	0,0	0 %
Total product	-	1,3	25 %	-	4,8	90 %
Cardboard (packaging)	50 %	0,5		100 %	1,1	
Total product and packaging		1,9	29 %	-	5,9	92 %

In manufacture, about 29% of the total mass of the chair and its packaging is recycled material. At the end of the chair's life, about 92% of its total mass will consist of materials that can be recycled.

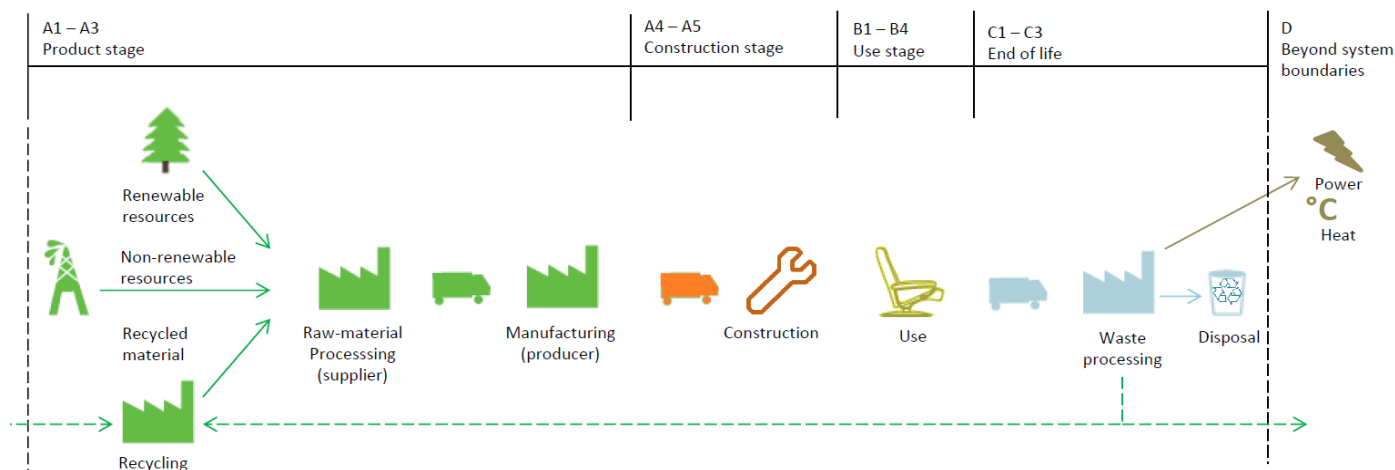
LCA: Calculation rules

Functional unit:

Production of one seating solution provided and maintained for a period of 15 years.

System boundary:

Life cycle stages included are described in figure and through the corresponding letter and number designations in the declaration (see figure below)



Data quality:

Specific data from suppliers and manufacturer 2011/2012 are used in the EPD analysis. Data from Ecoinvent database are used for raw material and energy carrier production.

Cut-off criteria:

Process and activities that contribute to more than 1% of the total environmental impact for each impact category must be included in the inventory. Input with lower content than 1% which can contain hazardous are also included.

Allocation:

- Where virgin materials are used, emissions and energy consumption connected with extraction and production are included.
- Where recycled materials are used in the product, emissions and energy consumption related to the recycling process are included.
- Emissions from incineration of waste are allocated to the product system that uses the recovered energy. This is a deviation from the PCR for Ecoinvent processes, where emissions from incineration are allocated to the product system in which the waste arises.
- Emissions from incineration of waste without energy recovery are allocated to the production system where the waste arises.

Additional information

According to the PCR the output should include both impact and the largest emissions (by mass) to air and water. Because of the format of the EPD the largest emissions are not presented.

The methods for calculating the environmental impact is IPCC 2007 for global warming and CML 2001 for other impact categories.

LCA: Scenarios and additional technical information

Transportation to an average customer in Copenhagen is 1000 km (A4). The use stage is represented by a scenario and includes vacuum cleaning of textile once a month. The PCR does not provide detailed guidelines for what should be included in the use stage. In the end of life stage, the transport distance for waste to waste processing is 72 km (C1). The reuse, recovery and recycling stage is beyond the system boundaries (D). It is assumed that the chair is dismantled and the materials recycled or combusted according to the general Norwegian treatment of industrial waste. The transport distance to reuse, recovery or recycling is varying for each material, but the average distance is 404 km.

LCA: Results

The following information describe the scenarios in the different modules of the EPD.

System boundaries (X=included, MND=module not declared, MNR=module not relevant)

Product stage			Construction stage		Use stage				End of life			Beyond the system boundaries
Raw materials	Transport	Manufacturing	Transport	Construction	Maintenance	Repair	Replacement	Operational energy use	Transport	Waste Processing	Disposal	Reuse-recovery-recycling potential
A1	A2	A3	A4	A5	B1	B2	B3	B4	C1	C2	C3	D
x	x	x	x	MNR	x	MNR	MNR	MNR	x	x	x	x

Environmental impact

Parameter	A1	A2	A3	A1-A3	A4	B1	C1	C2	C3	C1-C3	D
GWP	25	0,5	0,3	26	0,2	0,0	0,7	9,0	0,0	9,7	-5,6
ODP	0	0,0	0,0	0,0	0,0	0,0	NA	NA	NA	NA	NA
POCP	0	0,0	0,0	0,0	0,0	0,0	NA	NA	NA	NA	NA
AP	0	0,0	0,0	0,1	0,0	0,0	NA	NA	NA	NA	NA
EP	0	0,0	0,0	0,0	0,0	0,0	NA	NA	NA	NA	NA
ADPM	0	0,0	0,0	0,0	0,0	0,0	NA	NA	NA	NA	NA
ADPE	394	6,3	3,8	405	2,0	0,0	11	33	0	44	-167

NA - data not available

GWP Global warming potential (kg CO₂-eqv.); **ODP** Depletion potential of the stratospheric ozone layer (kg CFC11-eqv.); **POCP** Formation potential of tropospheric photochemical oxidants (kg C₂H₄-eqv.); **AP** Acidification potential of land and water (kg SO₂-eqv.); **EP** Eutrophication potential (kg PO₄⁻³-eqv.); **ADPM** Abiotic depletion potential for non fossil resources (kg Sb -eqv.); **ADPE** Abiotic depletion potential for fossil resources (MJ)

Resource use

Parameter	A1	A2	A3	A1-A3	A4	B1	C1	C2	C3	C1-C3	D
RPEE	44	0	5	49	0	0	0	0	0	0	-1
RPEM	19	0	1	20	0	0	0	0	0	0	-2
TPE	63	0	6	69	0	0	0	0	0	0	-2
NRPE	342	6	5	353	2	0	0	0	0	0	-164
NRPM	93	0	0	93	0	0	0	0	0	0	0
TRPE	434	6	5	445	2	0	0	0	0	0	-164
SM	2	0	0	2	0	0	0	0	0	0	0
RSF	0	0	0	0	0	0	0	0	0	0	0
NRSF	-6	0	0	-6	0	0	0	0	0	0	0
W	239	0	1	240	0	0	0	0	0	0	-2

RPEE Renewable primary energy resources used as energy carrier (MJ); **RPEM** Renewable primary energy resources used as raw materials (MJ); **TPE** Total use of renewable primary energy resources (MJ); **NRPE** Non renewable primary energy resources used as energy carrier (MJ); **NRPM** Non renewable primary energy resources used as materials (MJ); **TRPE** Total use of non renewable primary energy resources (MJ); **SM** Use of secondary materials (kg); **RSF** Use of renewable secondary fuels (MJ); **NRSF** Use of non renewable secondary fuels (MJ); **W** Use of net fresh water (m³)

End of life - Waste and Output flow

Parameter	A1	A2	A3	A1-A3	A4	B1	C1	C2	C3	C1-C3	D
HW	0	0	0	0	0	0	0	0	0	0	-0,04
NHW	4,2	0	0,1	4,4	0	0	0	0	0	0,3	-0,13
RW	0,0	0	0,0	0,0	0	0	0	0	0	0,0	0,00
CR	0,0	0	0,0	0,0	0	0	0	0	0	0,0	0,00
MR	0	0	0,1	0,2	0	0	0	4,1	0,0	4,1	0
MER	0	0	0	0	0	0	0	2,0	0,0	2,0	0
EEE	0	0	0	0	0	0	0	0	0	0	0
ETE	0	0	0	0	0	0	0	0	0	0	69

HW Hazardous waste disposed (kg); **NHW** Non hazardous waste disposed (kg); **RW** Radioactive waste disposed (kg); **CR** Components for reuse (kg); **MR** Materials for recycling (kg); **MER** Materials for energy recovery (kg); **EEE** Exported electric energy (MJ); **ETE** Exported thermal energy (MJ)

Specific Norwegian requirements

Electricity

The electricity consumed is assumed to be from the Nord Pool mix in the Nordic countries, European mix in Europe and energy mix in Indonesia is based on data from the World bank . The Nordic Production mix for electricity is based on 2011 data .

Greenhouse gas emissions 0,0427 kg CO₂ eq/MJ (Nordic production mix)

Dangerous substances

Non of the following substances have been added to the product: Substances on the REACH Candidate list of substances of very high concern (of 19.9.2013) substances on the Norwegian Priority list (of 19.9.2013) and substances that lead to the product being classified as hazardous waste. The chemical content of the product complies with regulatory levels as given in the Norwegian Product Regulations.

Indoor environment

<http://greenguard.org/en/ProductDetail.aspx?productID=4558&BrandID=11>

Climate declaration

Not relevant

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