epd-norge.no
The Norwegian EPD Foundation

ENVIRONMENTAL PRODUCT DECLARATION

In accordance with ISO 14025 [1]

Owner of the declaration	Flokk AS
Program holder and publisher	The Norwegian EPD Foundation
Declaration number	NEPD-1849-794-EN
Issue date	20.08.2019
Valid to	20.08.2024

OFFECCT Soundwave® Acoustic panel

Bella, Botanic, Ceramic, Flo, Geo, Scrunch, Sky, Stripes, Swell, Village

Product

OFFECCT AB

Manufacturer

General information

Product
OFFECCT Soundwave® acoustic panel
In moulded polyester fibre
W:585 D:60 W:585 Prod.no. 59008-11

General Information
The Norwegian EPD Foundation
Post Box 5250 Majorstuen, 0303 Oslo
Phone: +4797722020
e-mail: post@epd-norge.no

Declaration number:
NEPD-1849-794-EN

This declaration is based on Product Category Rules:
PCR for Seating Solution, NPCR 003:2015
in accordance with recommendations by the
Norwegian EPD Foundation. See [3]

Declared unit:
Swell acoustic panel offwhite
585x585 mm

Declared unit with option:
Moulded polyester fibre in offhite, grey or antracite

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

This EPD has been worked out by:
The declaration has been developed using Furniture EPD Tool Version 1.4.3, Approval: NEPDT04
Company specific data collected and registered by:
Laura Fouilland
Company specific data audited by:
Atle Thiis-Messel

Verification:
Independent verification of data, other environmental information and EPD has been carried out in accordance with ISO14024, 8.1.3. and 8.1.4. See [2]

externally

Mie Vold, Senior Research Scientist
(Independent verifier approved by EPD Norway)

Owner of the declaration:
Flokk AS
Contact person: Atle Thiis-Messel
Phone: + 47 982 56 830
E-mail: atle.messel@flokk.com

Manufacturer
OFFECCT AB

Place of production:
Grönhultsvägen, Tibro, Sweden

Management system:
ISO 14001, Certificate No. 14001-0336
From the accredited unit: SCAB Svensk Certifiering Norden AB
ISO 9001, Certificate No.9001-0336
From the accredited unit: SCAB Svensk Certifiering Norden AB

Org. No:
No 928 902 749

Issue date:
20.08.2019

Valid to:
20.08.2024

Comparability:
EPDs from programmes other than the Norwegian EPD Foundation may not be comparable

Year of study:
2019

Approved

Håkon Hauan
Managing Director of EPD-Norway

Key environmental indicators for OFFECCT Soundwave® panel	Unit	Cradle to Gate A1-A3
Global warming	kg CO_2	7
Total energy use	MJ	150
Amount of recycled material (packaging included)	%	30 %

Product

Product Description and Application

Soundwave® panel is a lightweight sound absorber in the upper frequency range (500 Hz and above). These panels help reduce disturbing reflections of environmental noise such as voices, telephones etc. Recyclable moulded polyester fibre in anthracite, grey, and offwhite

Technical Data

Total weight: 858g (packaging excluded)
Certified with Swedish Möbelfakta and Nordic Swan Ecolabel

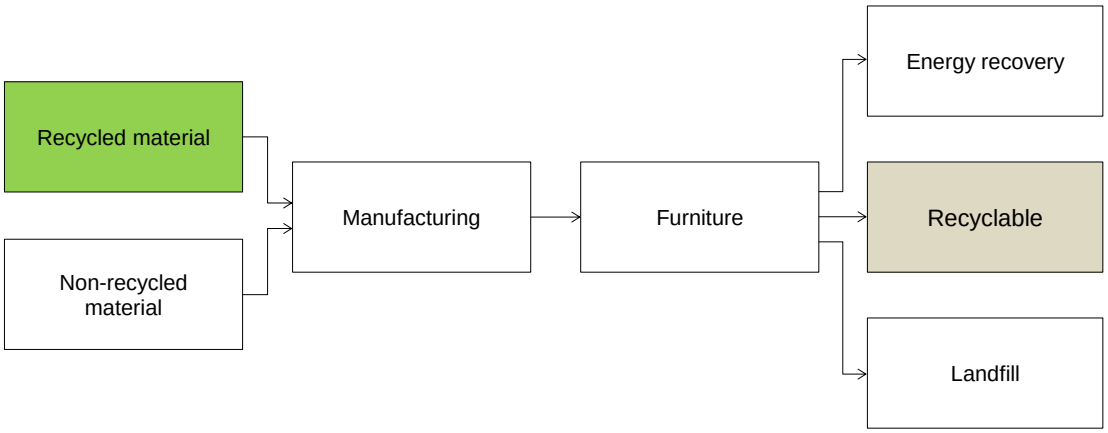
Market

Worldwide

Reference Service Life

15 years

Materials				Recycled share in product		Recyclable potential of product	
Unit		*g*	*%*	*g*	*%*	*g*	*%*
Felt	Polyester fibers	690	80 %	276	40 %	690	100 %
Plastic	Polyamide fibers (Velcro)	160	19 %	0	0 %	160	100 %
Other	Glue	8	1 %	0	0 %	0	0 %
Total product		**858**	100 %	**276**	**32 %**	**850**	**99 %**
Packaging	Cardboard	100		10	10 %	100	100 %
Total product with packaging		**958**		**286**	**30 %**	**950**	**99 %**

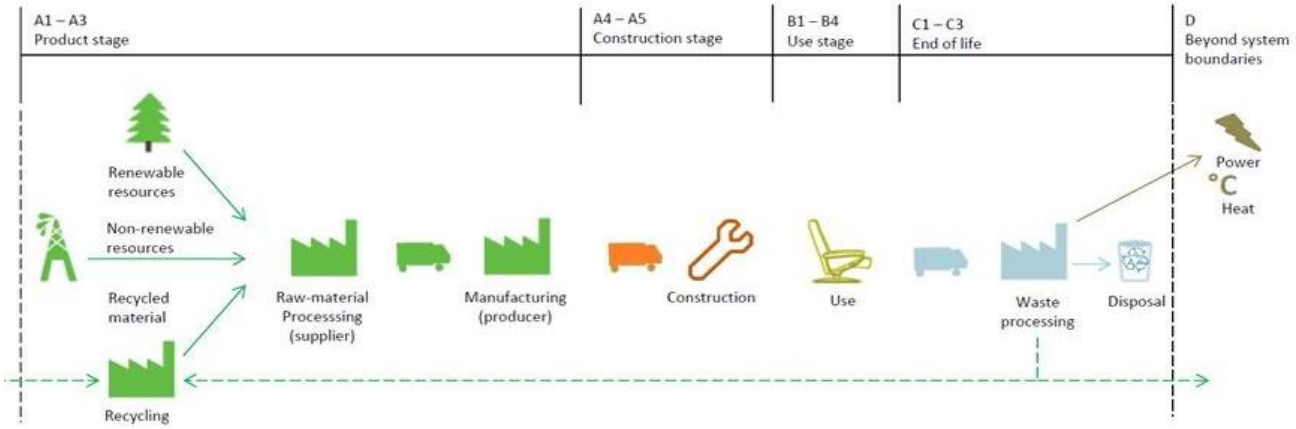


Product manufactured from 32% recycled material (packaging excluded)
At end of life product contains 99% recyclable material (packaging excluded)

LCA: Calculation rules

Declared 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 manufacturing data from 2014 are used. Data from Ecoinvent 3.0.1. and Østfoldforskning databases are used as the basis for raw materials and energy carrier production. See [5].

Cut-off criteria:
All major raw materials and all the essential energy is included. The production processes for raw materials and energy flows that are included with very small amounts (<1%) are not included. This cut-off rule does not apply for hazardous materials and substances.

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 are allocated to the product system that uses the recovered energy.
Emissions from incineration of waste are allocated to the product system that uses the recovered energy.

LCA: Scenarios and additional technical information

Transportation to an average customer in Copenhagen is 419 km (A4: average European lorry > 32 tonnes)

The use stage is represented by a scenario and includes vacuum cleaning of textile once a month. The PCR [3] 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 solution is dismantled and the materials recycled or combusted according to the general Norwegian treatment of industrial waste (see the table below). The transport distance to reuse, recovery or recycling is varying for each material, but the average distance is 373 km. The vehicles used and associated data are described in detail in [4].

	Material recovery	Energy recovery	Disposal
Aluminium	70,1%	0,0%	30 %
Steel	70,1%	0,0%	30 %
Plastic	64,3%	30,8%	5 %
Cardboard	94,5%	5,5%	0 %

LCA: Results

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

System boundaries (X=included, MND=modul not declared, MNR=modul 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 (INA=Indicator Not Assessed)

Parameter	A1	A2	A3	A1-A3	A4	B1	C1	C2	C3	C1-C3	D
GWP	6,9	0,1	0,5	7,4	3,5E-02	0,0	4,6E-02	2,5	0,0	2,5	-0,1
ODP	2,8E-07	1,0E-08	2,2E-08	3,1E-07	6,8E-09	0,0	INA	INA	INA	INA	0,0E+00
POCP	1,2E-03	9,0E-06	8,6E-05	1,3E-03	5,5E-06	0,0	INA	INA	INA	INA	0,0E+00
AP	2,8E-02	2,2E-04	2,2E-03	3,0E-02	1,3E-04	0,0	INA	INA	INA	INA	0,0E+00
EP	1,5E-02	4,6E-05	1,6E-03	1,6E-02	3,0E-05	0,0	INA	INA	INA	INA	0,0E+00
ADPM*	7,3E-06	9,9E-08	7,0E-07	8,1E-06	6,8E-08	0,0	INA	INA	INA	INA	0,0E+00
ADPE	97,9	0,9	5,5	104,3	0,6	0,0	INA	INA	INA	INA	-1,4

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);

* Some processes use Ecoinvent 3.0.1. and thus data on renewable resources is omitted. The true ADPM, RPEE, RPEM and TPE may be higher than indicated. This issue will be addressed in a new version of Ecoinvent 3, data from which was not available when this declaration was prepared.

Resource use (INA=Indicator Not Assessed)

Parameter	A1	A2	A3	A1-A3	A4	B1	C1	C2	C3	C1-C3	D
RPEE*	8,6	1,5E-02	0,6	9,2	9,9E-03	0,0	INA	INA	INA	INA	0,0
RPEM*	2,3	3,1E-03	0,1	2,4	2,1E-03	0,0	INA	INA	INA	INA	0,0
TPE*	10,9	1,8E-02	0,7	11,6	1,2E-02	0,0	INA	INA	INA	INA	0,0
NRPE	130,4	0,9	9,1	140,4	0,6	0,0	INA	INA	INA	INA	0,0
NRPM	0,0	0,0	0,0	0,0	0,0	0,0	INA	INA	INA	INA	0,0
TNRPE	130,4	0,9	9,1	140,4	0,6	0,0	INA	INA	INA	INA	0,0
SM	0,4	0,0	0,0	0,4	0,0	0,0	INA	INA	INA	INA	0,0
RSF	0,0	0,0	0,0	0,0	0,0	0,0	INA	INA	INA	INA	0,0
NRSF	0,0	0,0	0,0	0,0	0,0	0,0	INA	INA	INA	INA	0,0
W	0,0	0,0	0,0	0,0	0,0	0,0	INA	INA	INA	INA	0,0

RPEE Renewable primary energy resources used as energy carrier (MJ); **RPEM** Renwable 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); **TNRPE** 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 (INA=Indicator Not Assessed)

Parameter	A1	A2	A3	A1-A3	A4	B1	C1	C2	C3	C1-C3	D
HW	2,1E-04	4,3E-07	1,0E-05	2,2E-04	2,9E-07	0,0	INA	INA	INA	INA	0,0
NHW	1,3	0,1	0,1	1,5	0,1	0,0	INA	INA	INA	INA	0,0
RW	0,0	0,0	0,0	0,0	0,0	0,0	INA	INA	INA	INA	0,0
CR	0,0	0,0	0,0	0,0	0,0	0,0	INA	INA	INA	INA	0,0
MR	0,0	0,0	0,0	0,0	0,0	0,0	INA	INA	INA	INA	0,0
MER	0,0	0,0	0,0	0,0	0,0	0,0	INA	INA	INA	INA	0,0
EEE	0,0	0,0	0,0	0,0	0,0	0,0	INA	INA	INA	INA	0,0
ETE	0,0	0,0	0,0	0,0	0,0	0,0	INA	INA	INA	INA	0,0

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
Electricity used to produce this product comes from European sources.
The electricity mix used in this EPD is: Electricity, European average.
This gives following greenhouse gas emissions: 0,6 kg CO_2-eqv/kWh

Dangerous Substances
None of the following substances have been added to the product:
Substances on the Candidate list of substances of very high concern (published in accordance with Article 59(10) of the REACH Regulation).

Bibliography

[1] NS-EN ISO 14025:2006, Environmental labels and declarations-Type III environmental declarations Principles and procedures

[2] ISO 14024:1999, Environmental labels and declarations - Type I environmental labelling - Principles and procedures

[3] PCR for seating solution: PRODUCT-CATEGORY RULES(PCR) for preparing an environmental product declaration (EPD) for Product Group “Seating solution”, NPCR 003: 2015

[4] Raadal, H. L., Modahl, I. S., Lyng, K. A. (2009). Klimaregnskap for avfallshåndtering, Fase I og II. OR 18.09. ISBN : 978-82-7520-611-2, 82-7520-611-1

[5] Brekke, A., Møller, H., Baxter, J., Askham, C. (2014). Verktøy - miljødeklarasjon for møbel Dokumentasjon som grunnlag for verifisering, Ostfold Research

epd-norge.no The Norwegian EPD Foundation	**Program holder and publisher** The Norwegian EPD Foundation Post Box 5250 Majorstuen, 0303 Oslo Norge	Phone: +47 97722020 email: post@epd-norge.no web: www.epd-norge.no
Flokk	**Owner of the declaration** Flokk Fridtjof Nansens vei 12, 0303 Oslo Contact person: Laura Fouilland	Phone: +47 40 41 56 13 email: laura.fouilland@flokk.com web: www.flokk.com
Østfoldforskning	**Author of the Life Cycle Assessment** Østfoldforskning AS Stadion 4 1671 Kråkerøy, Norway	Phone: +47 69 35 11 00 email: post@ostfoldforskning.no web: www.ostfoldforskning.no