

ENVIRONMENTAL PRODUCT DECLARATION

in accordance with ISO 14025, ISO 21930 and EN 15804

Owner of the declaration:	Flokk Holding AS - OFFECCT
Program operator:	The Norwegian EPD Foundation
Publisher:	The Norwegian EPD Foundation
Declaration number:	NEPD-2268-1031-EN
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Issue date:	17.06.2020
Valid to:	17.06.2025

OFFECCT Carry On

Flokk Holding AS - OFFECCT



www.epd-norge.no



OFFECCT

General information

Product:

OFFECCT Carry On

Program operator:

The Norwegian EPD Foundation
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Phone: +47 23 08 80 00
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Declaration number:

NEPD-2268-1031-EN

ECO Platform reference number:

This declaration is based on Product Category Rules:

CEN Standard EN 15804:2012+A1:2013 serves as core PCR

Statement of liability:

The owner of the declaration shall be liable for the underlying information and evidence. EPD Norway shall not be liable with respect to manufacturer information, life cycle assessment data and evidences.

Declared unit:

1 Pcs OFFECCT Carry On

Declared unit with option:

A1,A2,A3,A4,A5,C1,C2,C3,D

Functional unit:

Verification:

Independent verification of data, other environmental information and the declaration according to ISO 14025:2010, § 8.1.3 and § 8.1.4

Third party verifier:

Sign

Seniorforsker Erik Svanes

(Independent verifier approved by EPD Norway)

Owner of the declaration:

Flokk Holding AS - OFFECCT
Contact person: Helena Lidenfors
Åberg
Phone:
e-mail: helena.l.berg@offecct.se

Manufacturer:

Flokk Holding AS - OFFECCT

Place of production:

OFFECCT Grönhultsvägen, Tibro. Sweden

Management system:

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

Organisation no:

No 925 902 749

Issue date:

17.06.2020

Valid to:

17.06.2025

Year of study:

2020

Comparability:

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

Author of the Life Cycle Assessment:

The declaration is developed using eEPD v4.0 from LCA.no
Approval:
Company specific data are:

Collected/registered by: Helena Lidenfors Åberg

Internal verification by: Laura Fouilland

Approved:

Sign

Håkon Hauan
Managing Director of EPD-Norway

Key environmental indicators	Unit	Cradle to gate A1 - A3
Global warming	kg CO2 eqv	23,70
Total energy use	MJ	503,71
Amount of recycled materials	%	22,85

Product

Market:

Worldwide

Product description:

Carry On is a portable seating solution that works perfectly by itself but also as a complement to other products. Carry On is designed by Mattias Stenberg who has a strong belief in the need of flexible working places in the public space. Today we work more in projects and need environments that can be easily adapted to different needs. Carry On is not only physically flexible, it also signals to the user how it should be used by the handle on top. Carry On has round but simple forms and combines traditional materials and craftsmanship with contemporary design and functions. It gives a tailored impression with stitching that communicates good craftsmanship. It is easy to stack Carry On, which means that it does not have to be stored elsewhere when not used.

Product specification

H 450/560, S 455, W 450/490, Ø450

Materials	kg	%	Recycled share in material (kg)	Recycled share in material (%)
Metal - Steel	0,47	8,32	0,24	50,00
Metal - Zinc	0,10	1,77	0,00	0,00
Textile - Wool	0,45	7,96	0,45	100,00
Plastic - Polyurethane (PUR)	1,90	33,63	0,00	0,00
Plastic - Polypropylene (PP)	0,20	3,54	0,10	50,00
Rubber, synthetic	0,02	0,35	0,00	0,00
Wood - Plywood	1,60	28,32	0,00	0,00
Wood - Solid spruce	0,60	10,62	0,00	0,00
Glue for wood	0,01	0,18	0,00	0,00
Plastic - Polyethylene (HDPE)	0,30	5,31	0,00	0,00

Packaging	kg		Recycled share in material (kg)	Recycled share in material (%)
Packaging - Cardboard	1,00		0,76	76,30
Packaging - Plastic	0,01		0,00	0,00
Packaging - Paper	0,20		0,00	0,00

LCA: Calculation rules

Declared unit:

1 Pcs OFFECCT Carry On

Cut-off criteria:

All major raw materials and all the essential energy is included. The production processes for raw materials and energy flows with very small amounts (less than 1%) are not included. These cut-off criteria do not apply for hazardous materials and substances.

Allocation:

The allocation is made in accordance with the provisions of EN 15804. Effects of primary production of recycled materials is allocated to the main product in which the material was used. The recycling process and transportation of the material is allocated to this analysis.

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.

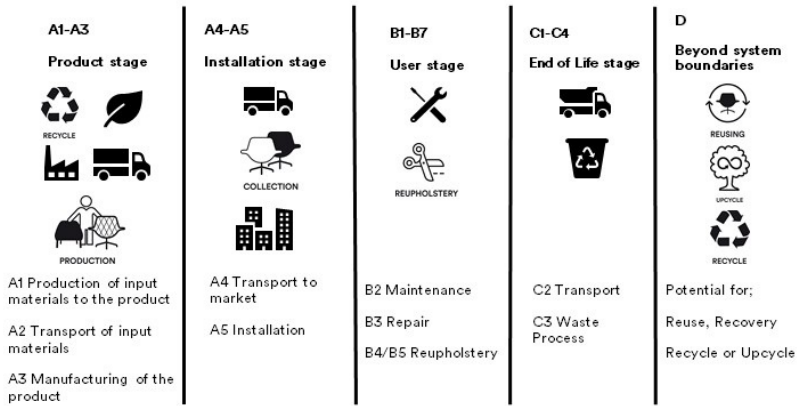
Data quality:

Specific data for the product composition are provided by the manufacturer. They represent the production of the declared product and were collected for EPD development in the year of study. Background data is based on registered EPDs according to EN 15804, Ostfold Research databases, ecoinvent and other LCA databases. The data quality of the raw materials in A1 is presented in the table below.

Specific manufacturing data from 2019 are used. Data from Ecoinvent 3.4 and Østfoldforskning databases are used as the basis for raw materials and energy carrier production.

System boundary:

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



Additional technical information:

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

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

User stage scenario: Estimate done that product needs to be cleaned once per year and possible replacement of fastenings once per life cycle (15 years). Transport scenario: Transportation to an average customer in Copenhagen is 420km. End of life: Assuming that there will be legal requirements in the near future for the separation of the constituents we have calculated in step C3 (end of life), the waste process according to this.

Transport from production place to user (A4)

Type	Capacity utilisation (incl. return) %	Type of vehicle	Distance km	Fuel/Energy consumption	Unit	Value (l/t)
Truck	38,8 %	Truck, 16-32 tonnes, EURO 5	420	0,044606	l/tkm	18,73
Railway					l/tkm	
Boat					l/tkm	
Other Transportation					l/tkm	

Assembly (A5)

.	Unit	Value
Auxiliary	kg	
Water consumption	m ³	
Electricity consumption	kWh	
Other energy carriers	MJ	
Material loss	kg	
Output materials from waste treatment	kg	1,0100
Dust in the air	kg	
VOC emissions	kg	

End of Life (C1, C3, C4)

.	Unit	Value
Hazardous waste disposed	kg	
Collected as mixed construction waste	kg	
Reuse	kg	
Recycling	kg	1,3400
Energy recovery	kg	5,0500
To landfill	kg	

Transport to waste processing (C2)

Type	Capacity utilisation (incl. return) %	Type of vehicle	Distance km	Fuel/Energy consumption	Unit	Value (l/t)
Truck	38,8 %	Truck, 16-32 tonnes, EURO 5	100	0,044606	l/tkm	4,46
Railway					l/tkm	
Boat					l/tkm	
Other Transportation					l/tkm	

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Benefits and loads beyond the system boundaries (D)

.	Unit	Value
Substitution of Wood, chipboard (kg)	kg/DU	1,00
Substitution of Plastic film, LDPE (kg)	kg/DU	0,01
Substitution of Steel, low-alloyed (kg)	kg/DU	0,84
Substitution of Polypropylene (kg)	kg/DU	0,20
Substitution of Polyethylene HDPE, granulate (kg)	kg/DU	0,30

LCA: Results

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

Product stage			Construction installation stage		User stage							End of life stage				Beyond the system boundaries
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
X	X	X	X	X	MNR	MNR	MNR	MNR	MNR	MNR	MNR	X	X	X	MNR	X

Environmental impact

Parameter	Unit	A1	A2	A3	A4	A5	C1	C2	C3	D
GWP	kg CO ₂ -eq	2,32E+01	1,94E-01	3,58E-01	4,87E-01	1,68E-02	0	1,16E-01	6,21E+00	-3,40E+00
ODP	kg CFC11 -eq	6,75E-07	3,55E-08	3,94E-07	8,98E-08	2,81E-09	0	2,14E-08	2,32E-08	-1,57E-07
POCP	kg C ₂ H ₄ -eq	7,28E-03	3,16E-05	9,41E-05	7,94E-05	2,72E-06	0	1,89E-05	5,32E-05	-1,73E-03
AP	kg SO ₂ -eq	1,33E-01	6,42E-04	1,95E-03	1,55E-03	6,23E-05	0	3,70E-04	1,55E-03	-1,49E-02
EP	kg PO ₄ ³⁻ -eq	1,71E-02	1,13E-04	4,69E-04	2,58E-04	1,37E-05	0	6,14E-05	4,08E-04	-3,15E-03
ADPM	kg Sb -eq	7,80E-04	6,07E-07	4,66E-06	1,49E-06	5,10E-08	0	3,54E-07	5,75E-07	-3,29E-05
ADPE	MJ	2,59E+02	2,91E+00	2,86E+00	7,34E+00	2,43E-01	0	1,75E+00	3,20E+00	-4,05E+01

GWP Global warming potential; ODP Depletion potential of the stratospheric ozone layer; POCP Formation potential of tropospheric photochemical oxidants; AP Acidification potential of land and water; EP Eutrophication potential; ADPM Abiotic depletion potential for non fossil resources; ADPE Abiotic depletion potential for fossil resources

Reading example: 9,0 E-03 = 9,0*10⁻³ = 0,009

*INA Indicator Not Assessed

Resource use

Parameter	Unit	A1	A2	A3	A4	A5	C1	C2	C3	D
RPEE	MJ	1,09E+02	4,28E-02	2,32E+01	1,07E-01	4,73E-03	0	2,55E-02	4,11E+01	-1,51E+01
RPEM	MJ	6,87E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0	0,00E+00	0,00E+00	-8,01E+00
TPE	MJ	1,78E+02	4,28E-02	2,32E+01	1,07E-01	4,73E-03	0	2,55E-02	4,11E+01	-2,31E+01
NRPE	MJ	3,16E+02	2,98E+00	5,24E+01	7,51E+00	2,51E-01	0	1,79E+00	8,64E+01	-4,61E+01
NRPM	MJ	5,26E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0	0,00E+00	0,00E+00	-2,03E+01
TRPE	MJ	3,68E+02	2,98E+00	5,24E+01	7,51E+00	2,51E-01	0	1,79E+00	8,64E+01	-6,64E+01
SM	kg	1,63E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0	0,00E+00	0,00E+00	0,00E+00
RSF	MJ	0,00E+00	0,00E+00	2,24E-02	0,00E+00	0,00E+00	0	0,00E+00	0,00E+00	0,00E+00
NRSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0	0,00E+00	0,00E+00	0,00E+00
W	m ³	2,73E-01	5,59E-04	1,32E-02	1,41E-03	4,87E-05	0	3,35E-04	3,32E-03	-1,47E-02

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

Reading example: 9,0 E-03 = 9,0*10⁻³ = 0,009

*INA Indicator Not Assessed

End of life - Waste

Parameter	Unit	A1	A2	A3	A4	A5	C1	C2	C3	D
HW	kg	1,59E-03	1,77E-06	1,91E-05	4,39E-06	1,56E-07	0	1,04E-06	9,47E-06	-1,51E-04
NHW	kg	1,17E+01	1,53E-01	3,72E-01	3,95E-01	1,35E-02	0	9,41E-02	4,17E-01	-3,13E+00
RW	kg	INA*	INA*	INA*	INA*	INA*	0	INA*	INA*	INA*

HW Hazardous waste disposed; NHW Non hazardous waste disposed; RW Radioactive waste disposed

Reading example: 9,0 E-03 = 9,0*10⁻³ = 0,009

*INA Indicator Not Assessed

End of life - Output flow

Parameter	Unit	A1	A2	A3	A4	A5	C1	C2	C3	D
CR	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0	0,00E+00	0,00E+00	0,00E+00
MR	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,01E+00	0	0,00E+00	1,29E+00	0,00E+00
MER	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,04E-04	0	0,00E+00	2,52E-02	0,00E+00
EEE	MJ	INA*	INA*	INA*	INA*	INA*	0	INA*	INA*	INA*
ETE	MJ	INA*	INA*	INA*	INA*	INA*	0	INA*	INA*	INA*

CR Components for reuse; MR Materials for recycling; MER Materials for energy recovery; EEE Exported electric energy; ETE Exported thermal energy

Reading example: 9,0 E-03 = 9,0*10⁻³ = 0,009

*INA Indicator Not Assessed

Additional Norwegian requirements

Greenhouse gas emissions from the use of electricity in the manufacturing phase

National production mix from import, low voltage (production of transmission lines, in addition to direct emissions and losses in grid) of applied electricity for the manufacturing process (A3).

Electricity mix	Data source	Amount	Unit
El-mix, Sweden (kWh)	ecoinvent 3.4 Alloc Rec	42,67	g CO ₂ -ekv/kWh

Dangerous substances

The product contains no substances given by the REACH Candidate list or the Norwegian priority list.

Indoor environment

Additional environmental information

Bibliography

ISO 14025:2010 Environmental labels and declarations - Type III environmental declarations - Principles and procedures.

ISO 14044:2006 Environmental management - Life cycle assessment - Requirements and guidelines.

EN 15804:2012+A1:2013 Environmental product declaration - Core rules for the product category of construction products.

ISO 21930:2017 Sustainability in buildings and civil engineering works - Core rules for environmental product declarations of construction products.

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Vold et al., (2019) EPD generator for Norsk Industri, Background information for industry application and LCA data, LCA.no report number 06.19.

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