



Environmental product declaration

in accordance with ISO 14025 and EN 15804+A2

BOB modular sofa system





The Norwegian EPD Foundation

Owner of the declaration:

Blå Station AB

Product

BOB modular sofa system

Declared unit:

1 pcs

This declaration is based on Product Category Rules:

CEN Standard EN 15804:2012+A2:2019 serves as

NPCR 026:2022 Part B for Furniture

Program operator:

The Norwegian EPD Foundation

Declaration number:

NEPD-7489-6875-EN

Registration number:

NEPD-7489-6875-EN

Issue date: 09.09.2024

Valid to: 09.09.2029

EPD software:

LCAno EPD generator ID: 235989



General information

Product

BOB modular sofa system

Program operator:

The Norwegian EPD Foundation
Post Box 5250 Majorstuen, 0303 Oslo, Norway

Phone: +47 977 22 020 web: www.epd-norge.no

Declaration number:

NEPD-7489-6875-EN

This declaration is based on Product Category Rules:

CEN Standard EN 15804:2012+A2:2019 serves as core PCR NPCR 026:2022 Part B for Furniture

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 BOB modular sofa system

Declared unit (cradle to gate) with option:

A1-A3,A4,A5,B2,B3,B4,C1,C2,C3,C4,D

Functional unit:

A sofa system providing almost unlimited options, constructed using the smallest possible number of modules. Where ordinary sofas are usually rectangular, square and predictable, BOB offers the architectonic freedom to either challenge or adhere to all types of spaces in non-domestic environments.

General information on verification of EPD from EPD tools:

Independent verification of data, other environmental information and the declaration according to ISO 14025:2010, § 8.1.3 and § 8.1.4. Verification of each EPD is made according to EPD-Norway's guidelines for verification and approval requiring that tools are i) integrated into the company's environmental management system, ii) the procedures for use of the EPD tool are approved by EPD-Norway, and iii) the process is reviewed annually by an independent third party verifier. See Appendix G of EPD-Norway's General Programme Instructions for further information on EPD tools

Verification of EPD tool:

Independent third party verification of the EPD tool, background data and test-EPD in accordance with EPDNorway's procedures and guidelines for verification and approval of EPD tools.

Third party verifier:

Elisabet Amat, GREENIZE projects

(no signature required)

Owner of the declaration:

Blå Station AB Contact person: William Lövdahl Phone: 044-30 00 348 e-mail: william@blastation.se

Manufacturer:

Blå Station AB

Place of production:

Blå Station AB

, Sweden

Management system:

ISO 9001:2015 - ISO 14001:2015

Organisation no:

556272-1091

Issue date:

09.09.2024

Valid to:

09.09.2029

Year of study:

2023

Comparability:

EPD of construction products may not be comparable if they not comply with EN 15804 and seen in a building context.

Development and verification of EPD:

The declaration is created using EPD tool lca.tools ver EPD2022.03, developed by LCA.no. The EPD tool is integrated in the company's management system, and has been approved by EPD Norway.

Developer of EPD: William Lövdahl

Reviewer of company-specific input data and EPD: Isaac Svensson

Approved:

Håkon Hauan, CEO EPD-Norge



Product

Product description:

BOB sofa system is a furniture produced for non-domestic environments, providing almost unlimited options, constructed using the smallest possible number of modules. Where ordinary sofas are usually rectangular, square and predictable, BOB offers the architectonic freedom to either challenge or adhere to all types of spaces. Through BOB's unique construction, the sofa system is easily repairable, replaceable, reupholsterable, reusable and recyclable without the help of specialized tools.

https://www.blastation.com/products/product-families/bob/bob-1#&tab=1

Product specification

Materials: Frame of wood, with moulded polyurethane foam with fabric or leather cover, plastic feet. Built-in connection fitting. All modules in this EPD are made with the same materials and processes.

This particular Environmental Product Declaration (EPD) is conducted for one specific module (S801).

For technical data on variants and options for Bob, please visit our website at: https://www.blastation.com/products/product-families/bob/bob-1#&tab=1

Materials	kg	%	Recycled share in material (kg)	Recycled share in material (%)
Metal - Stainless steel	0,25	2,20	0,05	21,83
Plastic - Nylon (PA)	0,09	0,77	0,00	0,00
Plastic - Polyurethane (PUR)	2,66	23,36	0,00	0,00
Textile	1,24	10,89	0,00	0,00
Wood - Laminated wood	1,38	12,15	0,00	0,00
Wood - Plywood	5,77	50,63	0,00	0,00
Total	11,39	100,00	0,05	

Packaging	kg	%	Recycled share in material (kg)	Recycled share in material (%)
Packaging - Plastic	0,37	12,16	0,00	0,00
Packaging - Wood	1,67	54,74	0,00	0,00
Recycled cardboard	1,01	33,10	1,01	100,00
Total incl. packaging	14,44	100,00	1,06	

Technical data:

BOB S801

Length: 87 cm Width: 26 cm Seat height: 40 cm Back height: 72 cm

The product is tested and approved according to the following standard:

EN 16139:2013 Furniture - Strength, durability and safety - Requirements for non-domestic seating. Test level 1

For technical data on variants of modules, please visit our homepage at: https://www.blastation.com/products/product-families/bob/bob-1#&tab=1

Market:

European market

Reference service life, product

The lifetime of the product depends on the application

Reference service life, building

LCA: Calculation rules

Declared unit:

1 pcs BOB modular sofa system

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. Incoming energy and water and waste production in-house is allocated equally among all products through mass allocation. 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.

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.

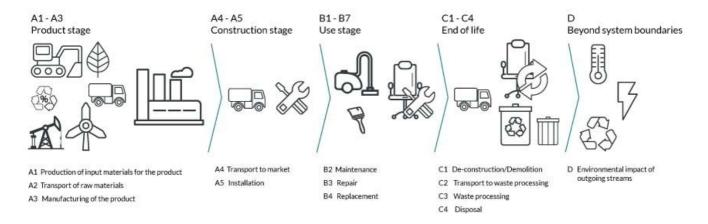
Materials	Source	Data quality	Year
Metal - Stainless steel	ecoinvent 3.6	Database	2019
Packaging - Plastic	ecoinvent 3.6	Database	2019
Packaging - Wood	Modified ecoinvent 3.6	Database	2019
Plastic - Nylon (PA)	ecoinvent 3.6	Database	2019
Plastic - Polyurethane (PUR)	ecoinvent 3.6	Database	2019
Recycled cardboard	Modified ecoinvent 3.6	Database	2019
Textile	MD-23113-EN_rev1	EPD	2021
Wood - Laminated wood	ecoinvent 3.6	Database	2019
Wood - Plywood	modified ecoinvent 3.6	Database	2019



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

P	roduct stag	ge		uction on 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	Disposal	Reuse-Recovery- Recycling-potential
A1	A2	A3	A4	A5	B1	B2	В3	B4	B5	В6	В7	C1	C2	C3	C4	D
Х	X	X	X	X	MND	Χ	Χ	X	MND	MND	MND	X	X	X	X	X

System boundary:



Additional technical information:

Maintenance and service guides:

For maintenance and service guides, please visit our website at: https://www.blastation.com/downloads/care-instructions

BOB is 100% recyclable. Ingoing materials and components should be separated and recycled in accordance with local laws and regulations.

Blå Station offers solutions for renovations and recycling based on customer's preferences, product, condition, quantity and region. Contact Blå Station for more information.

LCA: Scenarios and additional technical information

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

Absence of data for user and end of life stage:

B1: User stage is fully dependent on application and environment of the product.

B3-B5: Reparation, replacement and refurbishment of the product is dependent on non-domestic usage. Reparation, replacement, and refurbishment are possible, please contact Blå Station for further information for possible solutions.

B6-B7: BOB does not require energy nor water for operational usage.

C1: No special tools are needed for De-construction or demolition of ingoing materials.

Transport from production place to user (A4)	Capacity utilisation (incl. return) %	Distance (km)	Fuel/Energy Consumption	Unit	Value (Liter/tonne)
Truck, 16-32 tonnes, EURO 6 (km)	36,7 %	500	0,043	l/tkm	21,50
Assembly (A5)	Unit	Value			
Waste, packaging, cardboard, 100 % recycled, to average treatment (kg)	kg	1,01			
Waste, packaging, pallet, EUR wooden pallet, reusable, average treatment (kg)	kg	1,67			
Waste, packaging, plastic film (LDPE), to average treatment - A5 (kg)	kg	0,37			
Maintenance (B2)	Unit	Value			
Electricity, Sweden (kWh)	kWh/DU	0,15			
Water, tap water (kg)	kg/DU	0,50			
Transport to waste processing (C2)	Capacity utilisation (incl. return) %	Distance (km)	Fuel/Energy Consumption	Unit	Value (Liter/tonne)
Truck, 16-32 tonnes, HVO, EURO 6 (kgkm)	36,7 %	30	0,043	l/tkm	1,29
Waste processing (C3)	Unit	Value			
Waste treatment per kg Plastics, Mixture, municipal incineration with fly ash extraction (kg)	kg	0,09			
Waste treatment per kg Polyurethane (PU), incineration (kg)	kg	2,66			
Waste treatment per kg Scrap steel, incineration with fly ash extraction (kg)	kg	0,25			
Waste treatment per kg Textile, incineration with fly ash extraction (kg)	kg	1,24			
Waste treatment per kg Wood, incineration with fly ash extraction (kg)	kg	7,15			
Waste, materials to recycling (kg)	kg	0,08			
Disposal (C4)	Unit	Value			
Landfilling of ashes and residues from incineration of Scrap steel (kg)	kg	0,17			
Landfilling of ashes from incineration of Plastics, Mixture, municipal incineration with fly ash extraction, process per kg ashes and residues - C4 (kg)	kg	0,00			
Landfilling of ashes from incineration of Polyurethane (PU), process per kg ashes and residues - C4 (kg)	kg	0,10			
Landfilling of ashes from incineration of Textile, soiled, process per kg ashes and residues (kg)	kg	0,06			
Landfilling of ashes from incineration of Wood, process per kg ashes and residues (kg)	kg	0,08			
Benefits and loads beyond the system boundaries (D)	Unit	Value			
Substitution of electricity (MJ)	MJ	9,97			
Substitution of primary steel with net scrap (kg)	kg	0,07			
Substitution of thermal energy, district heating (MJ)	MJ	150,84			



LCA: Results

The LCA results are presented below for the declared unit defined on page 2 of the EPD document.

Environme	invironmental impact												
	Indicator		Unit		A1-A3	A4	A5	B2	В3				
	GWP-total		kg CO ₂ -e	eq	5,63E+01	1,18E+00	4,29E+00	8,41E-03	0				
	GWP-fossil		kg CO ₂ -e	eq	6,96E+01	1,18E+00	4,80E-02	7,76E-03	0				
	GWP-biogenic		kg CO ₂ -e	eq	-1,34E+01	4,88E-04	4,25E+00	1,55E-04	0				
	GWP-luluc		kg CO ₂ -e	eq	1,30E-01	4,20E-04	8,23E-06	4,93E-04	0				
Ø	ODP		kg CFC11	-eq	3,82E-06	2,67E-07	5,57E-09	3,74E-09	0				
Œ.	АР		mol H+ -	eq	4,70E-01	3,39E-03	1,32E-04	5,04E-05	0				
	EP-FreshWater		kg P -ec	1	4,97E-03	9,42E-06	2,22E-07	5,27E-07	0				
	EP-Marine		kg N -ed	7	6,57E-02	6,71E-04	6,65E-05	8,58E-06	0				
4	EP-Terrestial		mol N -e	eq	7,48E-01	7,50E-03	4,90E-04	1,13E-04	0				
	POCP		kg NMVOC	-eq	1,97E-01	2,87E-03	1,44E-04	2,58E-05	0				
	ADP-minerals&metals ¹		kg Sb-ed	7	4,73E-04	3,26E-05	5,91E-07	3,09E-07	0				
	ADP-fossil ¹		МЈ		1,31E+03	1,78E+01	3,76E-01	8,93E-01	0				
<u>@</u>	WDP ¹		m ³		1,02E+04	1,72E+01	7,59E-01	9,04E+01	0				
	Indicator		Unit	B4	C1	C2	C3	C4	D				
	Indicator GWP-total		Unit kg CO ₂ -eq	B4 0	C1 0	C2 1,69E-02	C3 2,11E+01	C4 1,41E-02	D -9,79E-01				
_	GWP-total		kg CO ₂ -eq	0	0	1,69E-02	2,11E+01	1,41E-02	-9,79E-01				
6	GWP-total GWP-fossil		kg CO ₂ -eq	0	0	1,69E-02 1,68E-02	2,11E+01 7,46E+00	1,41E-02 1,40E-02	-9,79E-01 -9,47E-01				
	GWP-total GWP-fossil GWP-biogenic		kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq	0 0 0	0 0	1,69E-02 1,68E-02 2,85E-05	2,11E+01 7,46E+00 1,37E+01	1,41E-02 1,40E-02 1,53E-05	-9,79E-01 -9,47E-01 -1,85E-03				
	GWP-total GWP-fossil GWP-biogenic GWP-luluc	k	kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq	0 0 0	0 0 0 0	1,69E-02 1,68E-02 2,85E-05 2,62E-05	2,11E+01 7,46E+00 1,37E+01 5,58E-05	1,41E-02 1,40E-02 1,53E-05 2,32E-06	-9,79E-01 -9,47E-01 -1,85E-03 -3,02E-02				
	GWP-total GWP-fossil GWP-biogenic GWP-luluc ODP	k	kg CO ₂ -eq	0 0 0 0	0 0 0 0	1,69E-02 1,68E-02 2,85E-05 2,62E-05 3,47E-09	2,11E+01 7,46E+00 1,37E+01 5,58E-05 4,37E-08	1,41E-02 1,40E-02 1,53E-05 2,32E-06 1,74E-09	-9,79E-01 -9,47E-01 -1,85E-03 -3,02E-02 -6,37E-02				
	GWP-total GWP-fossil GWP-biogenic GWP-luluc ODP AP	k	kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq cg CFC11 -eq mol H+ -eq	0 0 0 0 0	0 0 0 0 0	1,69E-02 1,68E-02 2,85E-05 2,62E-05 3,47E-09 1,18E-04	2,11E+01 7,46E+00 1,37E+01 5,58E-05 4,37E-08 7,47E-03	1,41E-02 1,40E-02 1,53E-05 2,32E-06 1,74E-09 5,35E-05	-9,79E-01 -9,47E-01 -1,85E-03 -3,02E-02 -6,37E-02 -7,57E-03				
	GWP-total GWP-fossil GWP-biogenic GWP-luluc ODP AP EP-FreshWater	k	kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq cg CFC11 -eq mol H+ -eq kg P -eq	0 0 0 0 0 0	0 0 0 0 0 0	1,69E-02 1,68E-02 2,85E-05 2,62E-05 3,47E-09 1,18E-04 6,17E-07	2,11E+01 7,46E+00 1,37E+01 5,58E-05 4,37E-08 7,47E-03 3,71E-06	1,41E-02 1,40E-02 1,53E-05 2,32E-06 1,74E-09 5,35E-05 1,86E-07	-9,79E-01 -9,47E-01 -1,85E-03 -3,02E-02 -6,37E-02 -7,57E-03 -8,22E-05				
	GWP-total GWP-fossil GWP-biogenic GWP-luluc ODP AP EP-FreshWater EP-Marine	ŀ	kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq cg CFC11 -eq mol H+ -eq kg P -eq kg N -eq	0 0 0 0 0 0	0 0 0 0 0 0	1,69E-02 1,68E-02 2,85E-05 2,62E-05 3,47E-09 1,18E-04 6,17E-07 3,12E-05	2,11E+01 7,46E+00 1,37E+01 5,58E-05 4,37E-08 7,47E-03 3,71E-06 4,09E-03	1,41E-02 1,40E-02 1,53E-05 2,32E-06 1,74E-09 5,35E-05 1,86E-07 1,71E-05	-9,79E-01 -9,47E-01 -1,85E-03 -3,02E-02 -6,37E-02 -7,57E-03 -8,22E-05 -2,43E-03				
	GWP-total GWP-fossil GWP-biogenic GWP-luluc ODP AP EP-FreshWater EP-Marine EP-Terrestial	ŀ	kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq kg CFC11 -eq mol H+ -eq kg P -eq kg N -eq mol N -eq	0 0 0 0 0 0 0	0 0 0 0 0 0 0	1,69E-02 1,68E-02 2,85E-05 2,62E-05 3,47E-09 1,18E-04 6,17E-07 3,12E-05 3,49E-04	2,11E+01 7,46E+00 1,37E+01 5,58E-05 4,37E-08 7,47E-03 3,71E-06 4,09E-03 3,97E-02	1,41E-02 1,40E-02 1,53E-05 2,32E-06 1,74E-09 5,35E-05 1,86E-07 1,71E-05 1,93E-04	-9,79E-01 -9,47E-01 -1,85E-03 -3,02E-02 -6,37E-02 -7,57E-03 -8,22E-05 -2,43E-03 -2,62E-02				
	GWP-total GWP-fossil GWP-biogenic GWP-luluc ODP AP EP-FreshWater EP-Marine EP-Terrestial POCP	ŀ	kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq kg CO ₂ -eq kg CFC11 -eq mol H+ -eq kg P -eq kg N -eq mol N -eq g NMVOC -eq	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0	1,69E-02 1,68E-02 2,85E-05 2,62E-05 3,47E-09 1,18E-04 6,17E-07 3,12E-05 3,49E-04 1,28E-04	2,11E+01 7,46E+00 1,37E+01 5,58E-05 4,37E-08 7,47E-03 3,71E-06 4,09E-03 3,97E-02 9,46E-03	1,41E-02 1,40E-02 1,53E-05 2,32E-06 1,74E-09 5,35E-05 1,86E-07 1,71E-05 1,93E-04 5,37E-05	-9,79E-01 -9,47E-01 -1,85E-03 -3,02E-02 -6,37E-02 -7,57E-03 -8,22E-05 -2,43E-03 -2,62E-02 -7,39E-03				

GWP-total = Global Warming Potential total; GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment: EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption

Remarks to environmental impacts

[&]quot;Reading example: 9,0 E-03 = 9,0*10-3 = 0,009"

^{*}INA Indicator Not Assessed

^{1.} The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator

Additional e	nvironmental impa	ct indicators						
	Indicator	Unit		A1-A3	A4	A5	B2	В3
	PM	Disease incidence		5,38E-06	7,22E-08	2,01E-09	3,65E-10	0
(IOI)	IRP ²	kgBq U235 -eq		8,30E+00	7,79E-02	1,62E-03	3,05E-02	0
4	ETP-fw ¹	CTUe		1,82E+03	1,32E+01	4,51E-01	4,73E-01	0
46.* *** 2	HTP-c ¹	CTUh		7,98E-08	0,00E+00	1,50E-11	1,50E-11	0
4° B	HTP-nc ¹	CTUh		3,03E-06	1,44E-08	6,52E-10	3,36E-10	0
	SQP ¹	dimensionless		3,06E+03	1,25E+01	3,80E-01	3,95E-01	0
I	ndicator	Unit	B4	C1	C2	C3	C4	D
	PM	Disease incidence	0	0	3,90E-09	3,30E-08	7,11E-10	-4,43E-07
	IRP ²	kgBq U235 -eq	0	0	1,16E-03	5,84E-03	6,61E-04	-7,96E-02
	ETP-fw ¹	CTUe	0	0	5, 19E-01	2,03E+01	2,31E-01	-7,21E+01
44.	HTP-c ¹	CTUh	0	0	0,00E+00	7,58E-10	1,00E-11	-1,60E-09
4	1	CTUh	0	0	8,66E-10	3,43E-08	4,12E-10	-5,76E-08
% <u>₽</u>	HTP-nc ¹	CTOIL	-			·	,	

PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality (dimensionless)

[&]quot;Reading example: 9,0 E-03 = 9,0*10-3 = 0,009"

^{*}INA Indicator Not Assessed

^{1.} The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator

^{2.} This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.

Resource use									
	Indicator		U	nit	A1-A3	A4	A5	B2	В3
Ē	PERE		N	۷J	5,80E+02	2,55E-01	7,36E-03	4,28E-01	0
	PERM		N	۷J	1,43E+02	0,00E+00	-2,91E+01	0,00E+00	0
Ţ,	PERT		N	۷J	7,23E+02	2,55E-01	-2,91E+01	4,28E-01	0
	PENRE		N	NJ	1,22E+03	1,78E+01	3,76E-01	8,95E-01	0
<u>An</u>	PENRM		N	NJ	1,01E+02	0,00E+00	-1,58E+01	0,00E+00	0
IA	PENRT		N	۷J	1,32E+03	1,78E+01	-1,54E+01	8,95E-01	0
<u></u>	SM		k	¢g	1,09E+00	0,00E+00	0,00E+00	0,00E+00	0
	RSF		MJ		8,48E+00	9,13E-03	2,21E-04	1,69E-03	0
	NRSF	МЈ		2,01E+00	3,26E-02	9,05E-04	5,27E-03	0	
6 6	FW		n	n ³	1,32E+00	1,91E-03	1,91E-04	1,47E-03	0
	Indicator Unit B4								
	ndicator	U	Init	B4	C1	C2	C3	C4	D
i i i i i i i i i i i i i i i i i i i	ndicator PERE		Init MJ	B4 0	C1 0	C2 1,61E-02	C3 1,04E-01	C4 7,32E-03	D -7,73E+01
		N							
Ö	PERE	V	MJ	0	0	1,61E-02	1,04E-01	7,32E-03	-7,73E+01
<u>.</u> 2	PERE PERM	N N	M1 M1	0	0	1,61E-02 0,00E+00	1,04E-01 -1,13E+02	7,32E-03 0,00E+00	-7,73E+01 0,00E+00
.€ 2 .⊊.	PERE PERM PERT	N N	M1 M1	0 0	0 0	1,61E-02 0,00E+00 1,61E-02	1,04E-01 -1,13E+02 -1,13E+02	7,32E-03 0,00E+00 7,32E-03	-7,73E+01 0,00E+00 -7,73E+01
1 1 1 1 1 1 1 1 1 1	PERE PERM PERT PENRE	N N N	M1 M1 M1	0 0 0	0 0 0 0	1,61E-02 0,00E+00 1,61E-02 3,56E-01	1,04E-01 -1,13E+02 -1,13E+02 3,69E+00	7,32E-03 0,00E+00 7,32E-03 1,44E-01	-7,73E+01 0,00E+00 -7,73E+01 -1,31E+01
	PERE PERM PERT PENRE PENRM	N N N	wi Wi Wi Wi	0 0 0 0	0 0 0 0	1,61E-02 0,00E+00 1,61E-02 3,56E-01 0,00E+00	1,04E-01 -1,13E+02 -1,13E+02 3,69E+00 -8,50E+01	7,32E-03 0,00E+00 7,32E-03 1,44E-01 0,00E+00	-7,73E+01 0,00E+00 -7,73E+01 -1,31E+01 0,00E+00
	PERE PERM PERT PENRE PENRM PENRT	N N N N	wi wi wi wi	0 0 0 0 0	0 0 0 0 0	1,61E-02 0,00E+00 1,61E-02 3,56E-01 0,00E+00 3,56E-01	1,04E-01 -1,13E+02 -1,13E+02 3,69E+00 -8,50E+01 -8,13E+01	7,32E-03 0,00E+00 7,32E-03 1,44E-01 0,00E+00 1,44E-01	-7,73E+01 0,00E+00 -7,73E+01 -1,31E+01 0,00E+00 -1,31E+01
	PERE PERM PERT PENRE PENRM PENRT SM	N N N N	MJ MJ MJ MJ kg	0 0 0 0 0 0	0 0 0 0 0 0	1,61E-02 0,00E+00 1,61E-02 3,56E-01 0,00E+00 3,56E-01 0,00E+00	1,04E-01 -1,13E+02 -1,13E+02 3,69E+00 -8,50E+01 -8,13E+01 0,00E+00	7,32E-03 0,00E+00 7,32E-03 1,44E-01 0,00E+00 1,44E-01 0,00E+00	-7,73E+01 0,00E+00 -7,73E+01 -1,31E+01 0,00E+00 -1,31E+01 0,00E+00

PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non renewable primary energy resources used as raw materials; PENRT = Total use of non renewable primary energy resources; SM = Use of secondary materials; PENRM = 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; FW = Net use of fresh water

"Reading example: 9,0 E-03 = 9,0*10-3 = 0,009" *INA Indicator Not Assessed

End of life - Waste								
	Indicator	U	nit	A1-A3	A4	A5	B2	В3
	HWD	k	g	2,66E-01	9,20E-04	0,00E+00	4,71E-05	0
Ū	NHWD	k	g	6,41E+00	8,67E-01	1,46E+00	2,97E-03	0
ā	RWD	kg		2,31E-02	1,21E-04	0,00E+00	1,34E-05	0
In	dicator	Unit	B4	C1	C2	C3	C4	D
Ā	HWD	kg	0	0	4,99E-05	0,00E+00	3,02E-01	-9,67E-04
Ū	NHWD	kg	0	0	5,29E-02	0,00E+00	1,02E-01	-3,25E-01
3	RWD	kg	0	0	1,42E-06	0,00E+00	8,29E-07	-6,53E-05

HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed

"Reading example: 9,0 E-03 = 9,0*10-3 = 0,009" *INA Indicator Not Assessed

End of life - Output flow								
Ind	Indicator			A1-A3	A4	A5	B2	В3
®▷	CRU	k	9	0,00E+00	0,00E+00	1,59E+00	0,00E+00	0
&▷	MFR	k	9	4,57E-01	0,00E+00	1,13E+00	0,00E+00	0
DF	MER	kį	9	7,67E-01	0,00E+00	8,28E-02	0,00E+00	0
50	EEE	M	МЈ		0,00E+00	1,15E-01	0,00E+00	0
DB	EET	M	J	7,59E+00	0,00E+00	1,75E+00	0,00E+00	0
Indicato	or	Unit	B4	C1	C2	C3	C4	D
Ø▷	CRU	kg	0	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00
\$>	MFR	kg	0	0	0,00E+00	8,48E-02	0,00E+00	0,00E+00
DF	MER	kg	0	0	0,00E+00	1,14E+01	0,00E+00	0,00E+00
50	EEE	МЈ	0	0	0,00E+00	9,72E+00	0,00E+00	0,00E+00
D	EET	MJ	0	0	0,00E+00	1,47E+02	0,00E+00	0,00E+00

CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported energy electrical; EET = Exported energy thermal

"Reading example: 9,0 E-03 = 9,0*10-3 = 0,009" *INA Indicator Not Assessed

Biogenic Carbon Content									
Unit	At the factory gate								
kg C	3,83E+00								
kg C	1,17E+00								
	kg C								

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO2

Additional 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	Source	Amount	Unit
Electricity, European average (kWh)	ecoinvent 3.6	428,03	g CO2-eq/kWh

Dangerous substances

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

Indoor environment

BOB is certified via Greenguard Gold. Products that have achieved GREENGUARD Gold Certification are scientifically proven to meet some of the world's most rigorous third-party chemical emissions standards, helping to reduce indoor air pollution and the risk of chemical exposure. This is a certificate proving that BOB can be used for environments with very strict standards for emission releases, such as schools and healthcare facilities.

Additional Environmental Information

Key Environmental Indicators

Key environmental indicators	Unit	A1-A3	A4	A1-C4	A1-D
GWPtotal	kg CO ₂ -eq	56,26	1,18	82,90	81,93
Total energy consumption	MJ	1805,36	18,13	1829,56	1734,64
Amount of recycled materials	%	7,37			

Additional environmental impact indicators required in NPCR Part A for construction products							
Indicator	Unit	Unit		A4	A5	B2	В3
GWPIOBC	kg CO ₂ -eq	kg CO ₂ -eq		1,18E+00	4,80E-02	8,40E-03	0
Indicator	Unit	B4	C1	C2	C3	C4	D
GWPIOBC	kg CO ₂ -eq	0	0	1,69E-02	9,49E+00	1,85E-02	-1,00E+00

GWP-IOBC: Global warming potential calculated according to the principle of instantaneous oxidation. In order to increase the transparency of biogenic carbon contribution to climate impact, the indicator GWP-IOBC is required as it declares climate impacts calculated according to the principle of instantaneous oxidation. GWP-IOBC is also referred to as GWP-GHG in context to Swedish public procurement legislation.

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 + A2:2019 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.

ecoinvent v3, Allocation, cut-off by classification, Swiss Centre of Life Cycle Inventories.

Iversen et al., (2021) eEPD v2021.09 Background information for EPD generator tool system verification, LCA.no Report number: 07.21 Ruud et al., (2023) EPD generator for NPCR026 Part B for Furniture - Background information for EPD generator application and LCA data, LCA.no report number 01.23

NPCR Part A: Construction products and services. Ver. 2.0. March 2021, EPD-Norge.

NPCR 026 Part B for Furniture. Ver. 2.0 March 2022, EPD-Norge.

Sustainability credentials:

https://spot.ul.com/main-app/products/detail/5eba8fd355b0e831d89a314e?page_type=Products%20Catalog

Möbelfakta:

Möbelfakta certificate.

Quality:

EN 16139:2013 Furniture - Strength, durability and safety - Requirements for non-domestic seating. Test level 1

Compression set test (describes the foam\'s ability to take pressure without collapsing)

Fire:

BS EN 1021-1:2014 (smouldering cigarette) - PASS BS EN 1021-2:2014 (Match flame equivalant) - PASS

Emissions:

GREENGUARD GOLD BLA STATION AB BOB (product family)

Certificate Number: 171816-420

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