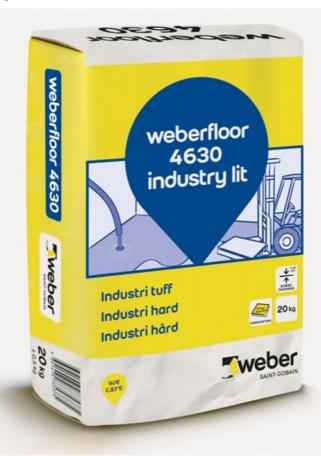


# Environmental product declaration

in accordance with ISO 14025 and EN 15804+A2

# weberfloor 4630 industry lit





The Norwegian EPD Foundation

# Owner of the declaration:

Saint-Gobain Sweden AB, Weber floor

#### **Product**:

weberfloor 4630 industry lit

#### **Declared unit:**

1 ka

#### This declaration is based on Product Category Rules:

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

NPCR 009:2018 Part B for Technical - Chemical products in the building and construction industry

# **Program operator:**

The Norwegian EPD Foundation

#### **Declaration number:**

NEPD-4064-3091-EN

#### Registration number:

NEPD-4064-3091-EN

#### Issue date:

19.12.2022

# Valid to:

19.12.2027

ver-140723

#### **EPD Software:**

LCA.no EPD generator ID: 52512



#### **General information**

#### **Product**

weberfloor 4630 industry lit

#### **Program operator:**

Post Box 5250 Majorstuen, 0303 Oslo, Norway The Norwegian EPD Foundation Phone: +47 23 08 80 00 web: post@epd-norge.no

#### **Declaration number:**

NEPD-4064-3091-EN

#### This declaration is based on Product Category Rules:

CEN Standard EN 15804:2012+A2:2019 serves as core PCR NPCR 009:2018 Part B for Technical - Chemical products in the building and construction industry

#### 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 kg weberfloor 4630 industry lit

#### **Declared unit with option:**

A1-A3,A4,A5,C1,C2,C3,C4,D

#### **Functional unit:**

#### 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:

Anne Rønning, Norsus AS (no signature required)

#### Owner of the declaration:

Saint-Gobain Sweden AB, Weber floor Contact person: Anders Anderberg Phone: +46 8 625 6105 e-mail: anders.anderberg@weber.se

#### Manufacturer:

Saint-Gobain Sweden AB, Weber floor

#### Place of production:

Saint-Gobain Sweden AB, Weber floor Box 415 SE-19162 Sollentuna, Sweden

#### Management system:

ISO 9001, ISO 14001

#### Organisation no:

SE-556241-2592

#### Issue date:

19.12.2022

#### Valid to:

19.12.2027

#### Year of study:

2021

#### **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: Thomas Flycht

Reviewer of company-specific input data and EPD: Helene Wallgren

# Approved:

Håkon Hauan Managing Director of EPD-Norway



# **Product**

#### **Product description:**

weberfloor 4630 industry lit is a pumpable, rapid hardening, self-levelling floor compound for use internally in buildings as a surface layer on industrial floors with heavy rolling loading. Under roof the product can be used outdoors on for example loading docks, garages and balconies. It is ready for traffic loading without further finishing but may need to be treated with a suitable surface treatment due to chemical load or aesthetic reasons.

#### **Product specification**

The composition of the product is described in the following table:

Materials	Value	Unit
Aggregate	35-70	%
Binder	20-70	%
Filler	1-10	%
Additives	1-10	%

#### **Technical data:**

weberfloor 4630 industry lit is designed, produced and CE marked according to EN 13813.

For further information, see www.se.weber

#### Market:

Scandinavian countries

#### Reference service life, product

> 50 years

#### Reference service life, building

> 50 years

#### LCA: Calculation rules

#### **Declared unit:**

1 kg weberfloor 4630 industry lit

#### **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. The data represent the production of the declared product and were collected for EPD development in the year of study. Background data is based on EPDs according to EN 15804 and different LCA databases. The data quality of the raw materials in A1 is presented in the table below.

Materials	Source	Data quality	Year
Additives	ecoinvent 3.6	Database	2019
Aggregate	ecoinvent 3.6	Database	2019
Binder	ecoinvent 3.6	Database	2019
Cement	ecoinvent 3.6	Database	2019
Filler	ecoinvent 3.6	Database	2019
Packaging	ecoinvent 3.6	Database	2019
Packaging	Modified ecoinvent 3.6	Database	2019
Binder	Supplier	EPD	2020
Additives	Supplier	EPD	2022



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

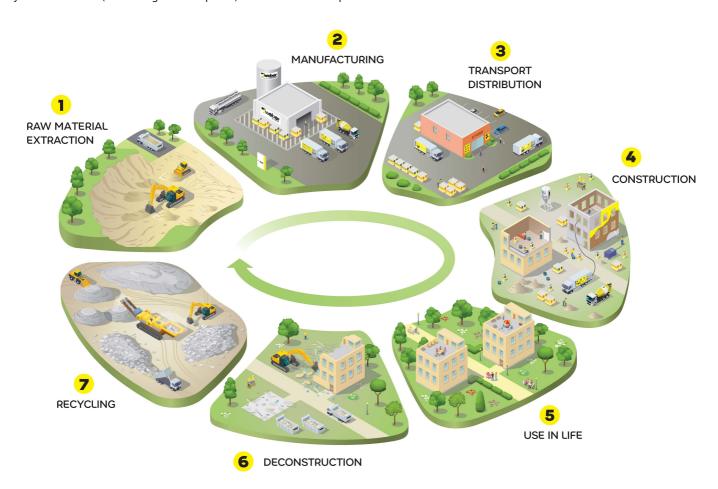
	Pi	roduct stag	ge		uction on stage		Use stage End					End of life stage			Beyond the system boundaries		
Raw	materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De- construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery- Recycling-potential
Α	.1	A2	A3	A4	A5	В1	B2	В3	B4	B5	В6	В7	C1	C2	C3	C4	D
X	(	Х	Х	Χ	Х	MNR	MNR	MNR	MNR	MNR	MNR	MNR	Х	Х	Х	Χ	X

#### System boundary:

All processes from raw material extraction to product transport to the construction site and assembly are included in the analysis as well as end of life stage and phases beyond the system boundary (A1 - A5, C1-C4, D). The basic production process comprises of mixing of raw materials together. Ready mixed product is then packed into small bags for delivery.

Floor screed doesn't require any maintenance during the use stage, so stage B is not considered. When building is demolished at the end-of-life, floor structure with floor screed integrated into concrete slab are crushed. 90 % of crushed concrete is recycled and used to replace aggregates in concrete, remaining 10% being disposed into landfill.

System boundaries (cradle-to-gate with options) are illustrated in the picture below



#### Additional technical information:

The consumption of the product is  $1.9 \text{ kg} / \text{m}^2 / \text{mm}$ .

The remaining powder and cured material may be disposed as construction waste to disposal or recycling.



# LCA: Scenarios and additional technical information

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

Transport to market (A4) is calculated based on the default distance of 300 km from NPCR 009

Transport from production place to user (A4)	Capacity utilisation (incl. return) %	Distance (km)	Fuel/Energy Consumption	Unit	Value (Liter/tonne)
Truck, over 32 tonnes, EURO 5 (km)	53,3 %	300	0,023	l/tkm	6,90
Assembly (A5)	Unit	Value			
	kg	0,00			
Electricity, Sweden (kWh)	kWh/DU	0,00			
Waste, packaging, pallet, EUR wooden pallet, reusable, to average treatment (kg)	kg	0,03			
Waste, packaging, paper bag, to average treatment (kg)	kg	0,00			
Water, tap water (m3)	m3/DU	0,00			
De-construction demolition (C1)	Unit	Value			
Demolition of building per kg of cement-based product (kg)	kg/DU	1,00			
Transport to waste processing (C2)	Capacity utilisation (incl. return) %	Distance (km)	Fuel/Energy Consumption	Unit	Value (Liter/tonne)
Truck, over 32 tonnes, EURO 5 (km)	53,3 %	50	0,023	l/tkm	1,15
Waste processing (C3)	Unit	Value			
Waste treatment of cement-based product after demolition (kg)	kg	0,90			
Disposal (C4)	Unit	Value			
Disposal of cement-based product in landfill (kg)	kg	0,10			
Benefits and loads beyond the system boundaries (D)	Unit	Value			
Substitution of primary aggregates with crushed recycled cement-based products (kg)	kg	0,90			



#### **LCA: Results**

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

Enviro	nmental impact									
	Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
	GWP-total	kg CO <sub>2</sub> -eq	3,42E-01	2,73E-02	4,68E-02	4,00E-03	4,55E-03	6,48E-04	8,22E-04	-2,10E-03
	GWP-fossil	kg CO <sub>2</sub> -eq	3,86E-01	2,73E-02	2,78E-04	4,00E-03	4,54E-03	6,39E-04	8,20E-04	-2,06E-03
	GWP-biogenic	kg CO <sub>2</sub> -eq	-4,51E-02	1,12E-05	4,66E-02	7,50E-07	1,86E-06	5,52E-06	9,58E-07	-4,11E-05
	GWP-luluc	kg CO <sub>2</sub> -eq	3,40E-04	7,96E-06	5,08E-06	3,15E-07	1,33E-06	8,84E-07	2,02E-07	-1,39E-06
٨	ODP	kg CFC11 -eq	2,63E-08	6,30E-09	6,50E-11	8,64E-10	1,05E-09	1,27E-10	3,10E-10	-3,77E-10
Œ	AP	mol H+ -eq	1,57E-03	1,15E-04	1,53E-06	4,19E-05	1,91E-05	5,17E-06	7,30E-06	-1,85E-05
-	EP-FreshWater	kg P -eq	4,16E-06	2,08E-07	1,17E-08	1,46E-08	3,47E-08	4,04E-08	9,30E-09	-5,48E-08
	EP-Marine	kg N -eq	5,55E-04	3,45E-05	4,08E-07	1,85E-05	5,74E-06	1,52E-06	2,71E-06	-6,43E-06
-	EP-Terrestial	mol N -eq	4,49E-03	3,81E-04	4,40E-06	2,00E-04	6,35E-05	1,75E-05	2,99E-05	-7,56E-05
	POCP	kg NMVOC -eq	1,30E-03	1,23E-04	1,19E-06	5,57E-05	2,04E-05	4,68E-06	8,56E-06	-2,00E-05
	ADP-minerals&metals <sup>1</sup>	kg Sb -eq	2,16E-06	4,66E-07	7,31E-09	6,14E-09	7,76E-08	8,11E-09	7,39E-09	-1,83E-07
<b>A</b>	ADP-fossil <sup>1</sup>	MJ	4,65E+00	4,24E-01	1,15E-02	5,51E-02	7,07E-02	1,98E-02	2,26E-02	-3,49E-02
<u>%</u>	WDP <sup>1</sup>	m <sup>3</sup>	4,42E+00	3,25E-01	9,26E-01	1,17E-02	5,42E-02	2,19E+00	1,39E-01	-1,63E+00

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

<sup>&</sup>quot;Reading example: 9,0 E-03 = 9,0\*10-3 = 0,009"

<sup>\*</sup>INA Indicator Not Assessed

<sup>1.</sup> 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



Addition	Additional environmental impact indicators									
In	dicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
	PM	Disease incidence	8,70E-09	2,40E-09	1,60E-11	5,07E-09	4,00E-10	8,20E-11	1,55E-10	-3,95E-10
	IRP <sup>2</sup>	kgBq U235 -eq	7,78E-03	1,85E-03	3,19E-04	2,40E-04	3,09E-04	3,33E-04	1,03E-04	-3,20E-04
	ETP-fw <sup>1</sup>	CTUe	2,37E+00	3,10E-01	7,80E-03	3,01E-02	5,17E-02	1,41E-02	1,23E-02	-3,59E-02
40.	HTP-c <sup>1</sup>	CTUh	4,10E-11	0,00E+00	0,00E+00	1,00E-12	0,00E+00	0,00E+00	0,00E+00	-1,00E-12
48	HTP-nc <sup>1</sup>	CTUh	1,82E-09	3,00E-10	1,10E-11	2,80E-11	5,00E-11	1,30E-11	7,00E-12	-4,50E-11
	SQP <sup>1</sup>	dimensionless	2,96E+00	4,86E-01	5,35E-03	6,69E-03	8,11E-02	1,12E-02	8,69E-02	7,91E-02

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 = Potential Soil Quality Index (dimensionless)

<sup>&</sup>quot;Reading example: 9,0 E-03 = 9,0\*10-3 = 0,009" \*INA Indicator Not Assessed

<sup>1.</sup> 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

<sup>2.</sup> 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										
Ir	ndicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
i ji	PERE	МЈ	4,95E-01	5,34E-03	4,46E-03	3,00E-04	8,90E-04	1,02E-02	8,08E-04	-8,16E-03
	PERM	MJ	4,19E-01	0,00E+00	-4,19E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
್ಕ್ಯ	PERT	МЈ	9,14E-01	5,34E-03	-7,15E-02	3,00E-04	8,90E-04	1,02E-02	8,08E-04	-8,16E-03
	PENRE	МЈ	3,01E+00	4,24E-01	1,18E-02	5,51E-02	7,07E-02	1,99E-02	2,26E-02	-3,68E-02
	PENRM	МЈ	1,81E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
<b>I</b>	PENRT	МЈ	4,82E+00	4,24E-01	1,18E-02	5,51E-02	7,07E-02	1,99E-02	2,26E-02	-3,68E-02
	SM	kg	1,37E-01	0,00E+00	4,37E-06	0,00E+00	0,00E+00	1,71E-05	9,79E-06	-7,05E-05
2	RSF	МЈ	4,28E-03	1,87E-04	3,02E-05	0,00E+00	3,11E-05	2,07E-04	1,68E-05	-1,67E-04
	NRSF	МЈ	1,24E+00	6,26E-04	7,01E-05	0,00E+00	1,04E-04	-1,28E-05	3,62E-05	-1,71E-04
<b>%</b>	FW	$m^3$	3,08E-03	4,83E-05	2,12E-04	2,83E-06	8,05E-06	3,40E-05	2,78E-05	-1,28E-03

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; PENRM = Use of non renewable primary energy resources; SM = Use of secondary materials; PENRM = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Net use of fresh water

<sup>&</sup>quot;Reading example: 9,0 E-03 = 9,0\*10-3 = 0,009" \*INA Indicator Not Assessed



End of life - Waste										
Inc	dicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
	HWD	kg	1,80E-03	2,32E-05	7,39E-07	1,62E-06	3,87E-06	1,98E-06	1,59E-06	-8,40E-06
Ū	NHWD	kg	1,52E-01	3,69E-02	5,64E-03	6,52E-05	6,15E-03	6,26E-05	1,00E-01	-2,55E-04
	RWD	kg	2,96E-05	2,90E-06	1,42E-07	3,82E-07	4,83E-07	2,10E-07	1,47E-07	-2,76E-07

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 - Outpu	nd of life - Output flow									
Indicat	tor	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
<b>∅</b> D	CRU	kg	5,64E-06	0,00E+00						
\$>	MFR	kg	7,08E-04	0,00E+00	4,49E-03	0,00E+00	0,00E+00	9,00E-01	8,92E-06	-1,65E-06
DF	MER	kg	2,81E-04	0,00E+00	2,91E-04	0,00E+00	0,00E+00	2,07E-06	1,68E-07	-6,17E-05
50	EEE	MJ	2,64E-03	0,00E+00	8,01E-04	0,00E+00	0,00E+00	3,55E-06	1,39E-05	-1,49E-05
DØ.	EET	MJ	3,99E-02	0,00E+00	1,21E-02	0,00E+00	0,00E+00	5,38E-05	2,10E-04	-2,25E-04

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	0,00E+00							
kg C	1,28E-02							
	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	Data source	Amount	Unit
Renewable electricity Saint-Gobain, based on 100% hydro power, with Guarantee of Origin from LOS 2021 (kWh)	ecoinvent 3.6	4,26	g CO2-eq/kWh

#### **Dangerous substances**

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

Name	CASNo	Amount
Portland Cement	65997-15-1	2-5%

#### **Indoor environment**

The product are certified Indoor Air Comfort GOLD.

#### **Additional Environmental Information**

Additional environmental impact indicators required in NPCR Part A for construction products									
Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
GWPIOBC	kg CO <sub>2</sub> -eq	4,05E-01	2,73E-02	8,24E-05	4,00E-03	4,55E-03	0,00E+00	0,00E+00	-2,20E-03

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.



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NPCR Part A: Construction products and services. Ver. 2.0, 24.03.2021 EPD Norway.

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