

# **ENVIRONMENTAL PRODUCT DECLARATION**

in accordance with ISO 14025, ISO 21930 and EN 15804

Owner of the declaration:	Saint-Gobain Sweden AB, Weber floor
Program operator:	The Norwegian EPD Foundation
Publisher:	The Norwegian EPD Foundation
Declaration number:	NEPD-3118-1777-EN
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ECO Platform reference number:	-
Issue date:	17.09.2021
Valid to:	17.09.2026

# weberfloor Extra rapid DR

Saint-Gobain Sweden AB, Weber floor



www.epd-norge.no





# General information

#### **Product:**

weberfloor Extra rapid DR

#### Program operator:

The Norwegian EPD Foundation Pb. 5250 Majorstuen, 0303 Oslo Phone: +47 23 08 80 00 e-mail: post@epd-norge.no

#### **Declaration number:**

NEPD-3118-1777-EN

#### ECO Platform reference number:

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

CEN Standard EN 15804:2012+A1:2013 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 Extra rapid DR

#### Declared unit with option:

A1,A2,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. Individual third party verification of each EPD is not required when the EPD tool is i) integrated into the company's environmental management system, ii) the procedures for use of the EPD tool are approved by EPDNorway, and iii) the proccess is reviewed annualy. 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.

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: 17.09.2021

Valid to: 17.09.2026

#### Year of study:

2020

#### **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 has been developed and verified using EPD tool lca.tools ver EPD2020.11, developed by LCA.no AS. The EPD tool is integrated into the company's environmental 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:

Sian

Håkon Hauan, CEO EPD-Norge



# Product

#### Product description:

weberfloor Extra rapid DR is an extra rapid drying pumpable selflevelling compound for floors in housing, offices and public areas indoors. It is possible to cover very early and can be used on concrete, wooden particle board, stone, ceramics and cement based screeds. It is suitable as underlayment for most surface coverings such as tiles, vinyl flooring, linoleum flooring and floating parquetry. The product is moisture-resistant and does not contain slag, flyash or casein.

#### **Product specification**

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

Materials	%
Aggregate	25-65
Filler	15-35
Binder	10-35
Additives	1-5

## LCA: Calculation rules

#### Declared unit:

1 kg weberfloor Extra rapid DR

#### 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.

#### Technical data:

we berfloor Extra rapid DR is designed, produced and CE marked according to  $\mathsf{EN}\xspace$  13813

For further information, see www.se.weber/

#### Market:

Scandinavian countries

#### Reference service life, product

> 50 years

Reference service life, building

> 50 years

#### 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, econvent and other LCA databases. The data quality of the raw materials in A1 is presented in the table below.

Materials	Source	Data quality	Year
Binder	Østfoldforskning	Database	2013
Binder	EPD-BVG-20140073-IAG1-EN	EPD	2014
Additives	ecoinvent 3.4	Database	2017
Aggregate	ecoinvent 3.4	Database	2017
Filler	ecoinvent 3.4	Database	2017
Packaging	ecoinvent 3.4	Database	2017
Packaging	Modified ecoinvent 3.4	Database	2017
Binder	ecoinvent 3.5	Database	2018
Cement	Supplier	EPD	2019

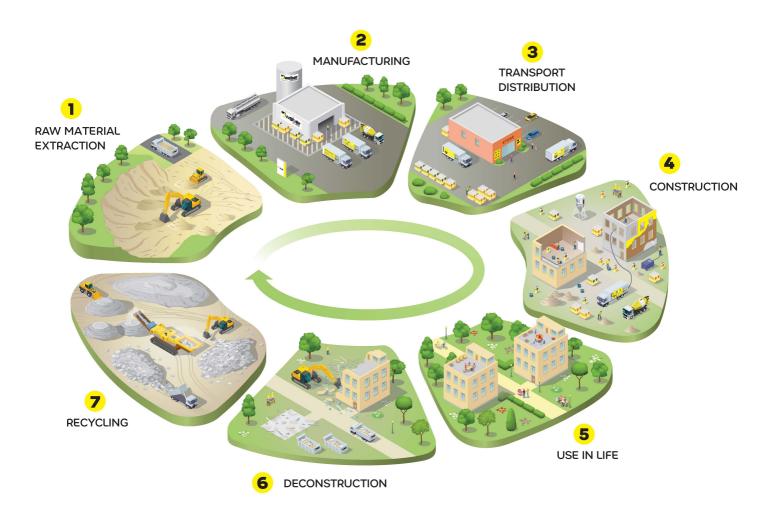


#### System boundary:

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  $1,8 \text{ kg} / \text{m}^2 / \text{mm}$ .

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 012

### Transport from production place to user (A4)

Туре	Capacity utilisation (incl. return) %	Type of vehicle	Distance km	Fuel/Energy consumption	Unit	Value (l/t)
Truck	55,0 %	Truck, lorry over 32 tonnes, EURO 5	300	0,022823	l/tkm	6,85
Railway					l/tkm	
Boat					l/tkm	
Other Transportation					l/tkm	

Additional A4 information	Unit/Range	Value
Lilleström, Norway (truck/truck to jobsite: 677 km)	Multiplication factor GWP/A4	165
Karlslunde, Denmark (truck/truck to jobsite: 885 km)	Multiplication factor GWP/A4	202
Helsinki, Finland (truck / roro boat / truck to jobsite: 952 km)	Multiplication factor GWP/A4	213

Assembly (A5)		
•	Unit	Value
Auxiliary	kg	
Water consumption	m <sup>3</sup>	0,0002
Electricity consumption	kWh	0,0015
Other energy carriers	MJ	
Material loss	kg	
Output materials from waste treatment	kg	0,0305
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	0,9000
Energy recovery	kg	
To landfill	kg	0,1000

#### Transport to waste processing (C2)

Туре	Capacity utilisation (incl. return) %	Type of vehicle	Distance km	Fuel/Energy consumption	Unit	Value (l/t)
Truck	55,0 %	Truck, lorry over 32 tonnes, EURO 5	50	0,022823	l/tkm	1,14
Railway					l/tkm	
Boat					l/tkm	
Other Transportation					l/tkm	

#### Benefits and loads beyond the system boundaries (D)

	Unit	Value
Substitution of primary aggregates with crushed recycled cement-based products (kg)	kg/DU	0,90

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# LCA: Results

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

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

Product stage			instal	uction lation Ige	User stage							End of I	life stage	)	Beyond the . system bondaries	
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De- construction demolition	Transport	W aste processing	Disposal	Reuse-Recovery- Recycling - potential
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	. D
Х	Х	Х	Х	Х	MNR	MNR	MNR	MNR	MNR	MNR	MNR	Х	Х	Х	Х	. X

### **Environmental impact**

Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
GWP	kg CO <sub>2</sub> -eq	2,06E-01	2,62E-02	3,60E-03	3,96E-03	4,36E-03	2,62E-04	5,18E-04	-3,57E-03
ODP	kg CFC11 -eq	1,22E-08	5,10E-09	2,14E-10	6,86E-10	8,50E-10	5,20E-11	1,72E-10	-4,62E-10
РОСР	kg C <sub>2</sub> H <sub>4</sub> -eq	3,63E-05	4,23E-06	2,93E-07	6,63E-07	7,05E-07	4,81E-08	1,58E-07	-9,30E-07
AP	kg SO <sub>2</sub> -eq	7,04E-04	8,51E-05	7,26E-06	2,99E-05	1,42E-05	1,32E-06	3,78E-06	-2,07E-05
EP	kg PO <sub>4</sub> <sup>3-</sup> -eq	1,16E-04	1,43E-05	1,85E-06	6,53E-06	2,38E-06	2,35E-07	6,67E-07	-3,67E-06
ADPM	kg Sb -eq	1,83E-06	5,91E-08	3,32E-09	1,70E-11	9,85E-09	1,60E-11	1,00E-11	-1,91E-10
ADPE	MJ	1,58E+00	4,11E-01	1,58E-02	5,47E-02	6,84E-02	2,55E-03	1,46E-02	-3,81E-02

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-A3	A4	A5	C1	C2	C3	C4	D
RPEE	MJ	9,70E-01	7,42E-03	3,14E-01	3,00E-04	1,24E-03	3,42E-03	1,19E-04	-1,28E-02
RPEM	MJ	5,33E-01	0,00E+00						
TPE	MJ	1,50E+00	7,42E-03	3,14E-01	3,00E-04	1,24E-03	3,42E-03	1,19E-04	-1,28E-02
NRPE	MJ	1,79E+00	4,23E-01	4,86E-02	5,52E-02	7,06E-02	6,68E-03	1,48E-02	-5,25E-02
NRPM	MJ	3,19E-02	0,00E+00						
TRPE	MJ	1,82E+00	4,23E-01	4,86E-02	5,52E-02	7,06E-02	6,68E-03	1,48E-02	-5,25E-02
SM	kg	5,92E-02	0,00E+00						
RSF	MJ	2,50E-02	0,00E+00	4,00E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	MJ	1,72E-01	0,00E+00						
W	m <sup>3</sup>	2,81E-03	9,98E-05	2,51E-04	4,75E-06	1,66E-05	1,67E-06	1,60E-05	-1,04E-03

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-A3	A4	A5	C1	C2	C3	C4	D
HW	kg	4,54E-05	2,25E-07	2,76E-08	1,50E-07	3,75E-08	6,16E-09	2,20E-08	-2,10E-07
NHW	kg	4,58E-02	3,84E-02	2,27E-03	2,50E-04	6,40E-03	7,53E-05	1,00E-01	-1,85E-03
RW	kg	INA*							
HW Hazardous waste disposed; NHW Non hazardous waste disposed; RW Radioactive waste disposed									
"Proding example: $0.0 \pm 0.2 = 0.000$ "									

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

### End of life - Output flow

Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
CR	kg	0,00E+00							
MR	kg	5,57E-05	0,00E+00	6,33E-03	0,00E+00	0,00E+00	3,01E-01	0,00E+00	0,00E+00
MER	kg	5,40E-03	0,00E+00	2,42E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	MJ	INA*							
ETE	MJ	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
Renewable electricity with Guarantee of Origin from LOS (kWh)	Modified ecoinvent 3.4	60,20	g CO2-ekv/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 meets the requirements for emissions by EMICODE

## **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.

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NPCR Part A: Construction products and services. Ver. 1.0. April 2017, EPD-Norge.

NPCR 009 Part B for technical-chemical products. Ver. 1.0 June 2018, EPD-Norge.

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