RTS EPD
RTS_22_19
weber.vetonit 3100, 3300, 3400, 4100, 4400, 5000. 5400. 6000 and 8000

Program operator, publisher:	The Building Information Foundation RTS sr
Owner of the declaration:	Saint-Gobain Finland Oy / Weber
Name of the product:	weber.vetonit 3100, 3300, 3400, 4100, 4400, 5000, 5400, 6000 and 8000
Declaration number:	RTS_22_19
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Laura Sariola Secretary of certification group Markku Hedman Director General	Saint-Gobain Finland Oy / Weber Environmental Product Declaration (EPD) is in accordance with EN 15804 + A1. In addition, the RTS PCR has been used as an additional guidance. Environmental Product Declaration lists all the environmental impacts of the product during the life cycle. EPD is verified by an independent external party.

General information

Manufacturer and Contact Information

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Conductor of Life Cycle Assessment (LCA) and Environmental Product Declaration (EPD)

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Product Category Rules

In preparation of the EPD has been used RTS PCR protocol: EPDs published by the Building Information Foundation RTS sr (02.06.2016) together with EN 15804+A1: Sustainability of construction works – Environmental product declaration – Core rules of the product category of construction products and ISO:14025 Environmental labels and declarations. Type III environmental declarations. Principles and procedures. 2010

Date of publication and validity of EPD

EPD is valid 30/10/2018 - 30/10/2023

Verification

The EPD is verified by an independent external party according to the EN 15804+A1 standard. The EPD is verified by Bionova Oy, MSc Tytti Bruce-Hyrkäs according to the product category rules presented above. Hämeentie 17 A, 00500 Helsinki, Finland, www.bionova.fi.

Verified according to the requirements of EN 15804+A1 (product group rules)	
Independent verification of the declaration and data, according to ISO14025:2010	
☐ Internal	☑ External
Third party verifier: *Tytti Bruce-Hyrkäs* Tytti Bruce-Hyrkäs < Name of the third party verifier >	

Product description

Description of the product and its use

The products covered by this declaration are a family of hand-applied floor screeds for indoor use, aimed for levelling and as a ground for further surface covering, such as carpet, parquet

	Pumpable	Self level-ling	Rapid cur-ing	Fibre rein-forced	Intended layer thickness (mm)
weber.vetonit 3100	x	x	x		0-10
weber.vetonit 3300	x	x	x	x	5-30
weber.vetonit 3400			x		0-5
weber.vetonit 4100	x	x			4-50
weber.vetonit 4400			x		0-30
weber.vetonit 5000			x		5-50
weber.vetonit 5400			x	x	5-100
weber.vetonit 6000			x		10-250
weber.vetonit 8000	x		x	x	10-100

or tiling.

Product standard

The floor screeds are designed, produced and CE marked according to EN 13813.

Physical characteristics

The products are supplied from production in dry form, premixed in respect of all contents but water. Water is added at the workplace, in a defined amount and technique, to produce a floor screed of high performance.

For specific physical properties, we refer to the CE-declaration or Declaration of Performance connected to the datasheet on www.e-weber.fi.

Main product components and raw materials

The floor screeds are made of special cements, aggregates, supplementary binders and chemical admixtures. The screeds do not include Substances of very high concern (SVHC).

Component		Amount	CAS-nr	Classification	Comment
Aggregate	Silica sand	0 - 80 %	-	-	Respirable quartz content <0.1% (particles <5µm)
Filler	Limestone	1 - 65 %	72608-12-9	-	-
Binder	Aluminate cement	10 - 30 %	65997-16-2	-	-
Binder	$CaSO_4$	0 - 10 %	7778-18-9	-	-
Binder	Portland cement	5 - 10 %	65997-15-1	Xi, R37/38-41	-
Polymer binder	Resin Vinyl Acetate	0,1 - 5 %	-	-	-
Additives	Various	0 - 10 %	-	-	Fibres, Plasticizer

LCA calculation information

According to EN 15804, an EPD of construction products may not be comparable if they do not comply with this standard. EPD might not be comparable if different functional unit or reference thickness is used.

Declared unit / Functional unit

This EPD describes the environmental effect of 1m^2 of floor screed throughout the life cycle. In this analysis, the quantity used was 34 kg of dry mortar per m^2, which is equivalent to a 20 mm thickness. The density of hand-applied floor screeds are 1700 kg/m^3. If the applied floor screed thickness differs from average 20 mm thickness used in LCA assessment, there is a conversion chart as an annex 1. In this case the results from LCA assessment should be multiplied by the conversion factor given in conversion chart.

System boundaries

Cradle-to-Grave;

- product stage (A1-A3),
- construction process stage (A4-A5),
- use stage (B1-B7),
- end-of-life stage (C1-C4).

Cut-off rules

In the inventory of the input flows a 1 % cut-off rule has been applied. The 1 % cut-off rule is based on the assumption that these input flows do not have a major impact on the environmental impacts as a whole (EN 15805 6.3.5).

Machines and facilities (capital goods) required for and during production are excluded, as is transportation of employees.

Reference service life (RSL)

If properly installed, the service life time of the screed is equal to the lifetime of the building, and 50 years as a default. Product-specific work instructions can be found on the product card of each product, available on the company's website at www.e-weber.fi.

Year of study

Raw-material, transport, manufacturing, construction process, use and end-of-life data: 2016.

LCA-software

SimaPro 8,

PRé Consultants, Netherlands

	Production			Construc-tion process		Use							End-of-life				Loads beyond the system boundary		
Modules	A1-A3			A4-A5		B1-B7							C1-C5				D		
Included in the assess-ment	X			X		X							X						
R/NR	R	R	R	R	R	R	R	R	R	R	NR	NR	R	R	R	R			
	A1: Raw material supply	A2;Transports	A3; Manufacturing	A4; Transports	A5; Installation	B1; Use	B2; Maintenance	B3; Repair	B4; Replacement	B5; Refurbishment	B6; Energy use	B7; Water use	C1; De-construction	C2; Transport	C3; Waste processing	C4; Disposal	Reuse	Recovery	Recycling

R= Relevant
NR = Not relevant

Product stage; A1-A3

A1; Raw-material supply

The raw material supply covers sourcing and production of all raw materials, fuels and energy used. The supply of packaging materials is also included in module A1.

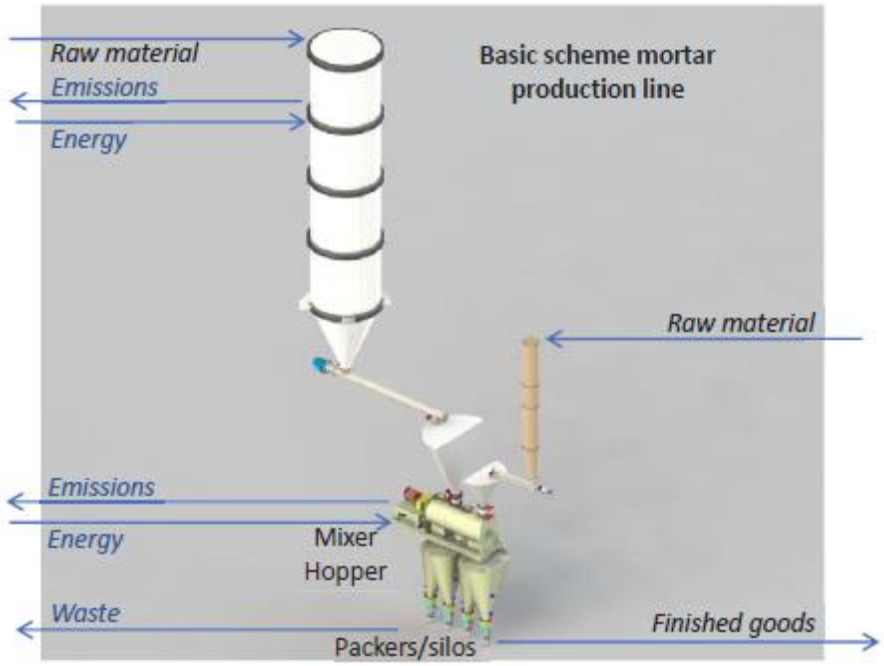
The emission factor for electricity is 231g CO_2-eq/kWh.

A2; Transports
Transports of the different raw materials to the manufacturing plant as well as internal transports at the plant is taken into account.

A3; Manufacturing
The manufacturing process covers drying, grinding and screening of sand, dosing and mixing of the raw-materials and additives.

The emissions from the combustion of fuels and the disposal of generated waste are taken into account in the manufacturing phase. There are no other airborne emissions. There are neither any emissions to the water nor the ground in the manufacturing process.

Manufacturing process flow diagram



Construction process stage; A4-A5

A4; Transports
Transport distance to the construction site is estimated to be 90 km from the manufacturing site (Kiikala – Helsinki).

A5; Installation
The installation of the product is considered to be done by hand and by adding water to the product. The water consumption is estimated to be 20 % of the product weight. Wastage of product in the installation is estimated to 0 %.

Use stage; B1-B7

The use phase consists of the following modules:
B1: Use
B2: Maintenance
B3: Repair
B4: Replacement
B5: Refurbishment
B6: Operational energy use
B7: Operational water use

Once the product is installed, no actions or technical operations are required during the use phase until the demolition of the construction. No operational energy or water use is required by the product, and therefore phases B6 and B7 are not relevant in the evaluation.

End-of-life stage; C1-C4

C1; De-construction
The de-construction and/or demolition of the product is part of the demolition of the entire construction. The deconstruction is considered to be done by excavation.

C2; Transports
It is estimated that 50 % of the demolished product is processed on-site and 50 % is transported to a separate location for processing. Transport distance to processing is estimated to be < 30 km.

C3; Waste processing
The generated waste is crushed and recycled as material.

C4; Disposal
No generated waste is disposed to landfill.

Benefits and loads beyond the system boundary; D

This EPD doesn't present the benefits or scenarios outside the lifecycle according module D (Reuse, Recovery Recycling).

LCA results

All the results of the life cycle assessment are calculated for a floor thickness equal to 20 mm thick and 1 m^2 surface area.

Environmental impacts, A1-B5: vetonit 3100

Impact category	unit	A1-A3	A4	A5	B1	B2	B3	B4	B5
Global warming	kg CO2 eq	9.76	0.53	0.04	0	0	0	0	0
Ozone depletion	kg CFC 11 eq	9.24E-07	9.59E-08	1.50E-09	0	0	0	0	0
Acidification	kg SO2 eq	3.61E-02	1.73E-03	1.78E-04	0	0	0	0	0
Eutrophication	kg (PO4)3- eq	4.72E-03	3.81E-04	2.26E-04	0	0	0	0	0
Photochemical ozone creation	kg Ethene eq	1.64E-03	8.84E-05	7.33E-06	0	0	0	0	0
Depletion of abiotic resources - elements	kg Sb eq	1.13E-05	1.06E-06	9.34E-09	0	0	0	0	0
Depletion of abiotic resources – fossil fuels	MJ	105.84	7.94	0.12	0	0	0	0	0

Environmental impacts, A1-B5: vetonit 3300

Impact category	unit	A1-A3	A4	A5	B1	B2	B3	B4	B5
Global warming	kg CO2 eq	9.25	0.53	0.04	0	0	0	0	0
Ozone depletion	kg CFC 11 eq	8.77E-07	9.59E-08	1.55E-09	0	0	0	0	0
Acidification	kg SO2 eq	3.48E-02	1.73E-03	1.84E-04	0	0	0	0	0
Eutrophication	kg (PO4)3- eq	4.47E-03	3.81E-04	2.34E-04	0	0	0	0	0
Photochemical ozone creation	kg Ethene eq	1.57E-03	8.84E-05	7.59E-06	0	0	0	0	0
Depletion of abiotic resources - elements	kg Sb eq	1.04E-05	1.06E-06	9.69E-09	0	0	0	0	0
Depletion of abiotic resources – fossil fuels	MJ	100.12	7.94	0.12	0	0	0	0	0

Environmental impacts, A1-B5: vetonit 3400

Impact category	unit	A1-A3	A4	A5	B1	B2	B3	B4	B5
Global warming	kg CO2 eq	17.26	0.53	0.07	0	0	0	0	0
Ozone depletion	kg CFC 11 eq	1.58E-06	9.74E-08	2.59E-09	0	0	0	0	0
Acidification	kg SO2 eq	6.79E-02	1.76E-03	3.06E-04	0	0	0	0	0
Eutrophication	kg (PO4)3- eq	7.55E-03	3.86E-04	3.90E-04	0	0	0	0	0
Photochemical ozone creation	kg Ethene eq	2.90E-03	8.97E-05	1.26E-05	0	0	0	0	0
Depletion of abiotic resources - elements	kg Sb eq	1.77E-05	1.08E-06	1.62E-08	0	0	0	0	0
Depletion of abiotic resources – fossil fuels	MJ	175.10	8.06	0.20	0	0	0	0	0

Environmental impacts, A1-B5: vetonit 4100

Impact category	unit	A1-A3	A4	A5	B1	B2	B3	B4	B5
Global warming	kg CO2 eq	6.18	0.52	0.01	0	0	0	0	0
Ozone depletion	kg CFC 11 eq	6.39E-07	9.39E-08	3.07E-10	0	0	0	0	0
Acidification	kg SO2 eq	2.34E-02	1.69E-03	3.28E-05	0	0	0	0	0
Eutrophication	kg (PO4)3- eq	2.83E-03	3.73E-04	1.59E-05	0	0	0	0	0
Photochemical ozone creation	kg Ethene eq	9.96E-04	8.66E-05	1.33E-06	0	0	0	0	0
Depletion of abiotic resources - elements	kg Sb eq	6.14E-06	1.04E-06	5.97E-10	0	0	0	0	0
Depletion of abiotic resources – fossil fuels	MJ	64.46	7.77	0.08	0	0	0	0	0

Environmental impacts, A1-B5: vetonit 4400

Impact category	unit	A1-A3	A4	A5	B1	B2	B3	B4	B5
Global warming	kg CO2 eq	14.20	0.53	0.04	0	0	0	0	0
Ozone depletion	kg CFC 11 eq	1.52E-06	9.59E-08	1.45E-09	0	0	0	0	0
Acidification	kg SO2 eq	6.58E-02	1.73E-03	7.98E-05	0	0	0	0	0
Eutrophication	kg (PO4)3- eq	6.92E-03	3.81E-04	2.22E-04	0	0	0	0	0
Photochemical ozone creation	kg Ethene eq	2.76E-03	8.84E-05	4.18E-06	0	0	0	0	0
Depletion of abiotic resources - elements	kg Sb eq	1.27E-05	1.06E-06	8.06E-09	0	0	0	0	0
Depletion of abiotic resources – fossil fuels	MJ	122.91	7.94	0.12	0	0	0	0	0

Environmental impacts, A1-B5: vetonit 5000

Impact category	unit	A1-A3	A4	A5	B1	B2	B3	B4	B5
Global warming	kg CO2 eq	6.13	0.53	0.04	0	0	0	0	0
Ozone depletion	kg CFC 11 eq	6.24E-07	9.59E-08	1.55E-09	0	0	0	0	0
Acidification	kg SO2 eq	2.26E-02	1.73E-03	1.84E-04	0	0	0	0	0
Eutrophication	kg (PO4)3- eq	3.28E-03	3.81E-04	2.34E-04	0	0	0	0	0
Photochemical ozone creation	kg Ethene eq	1.09E-03	8.84E-05	7.59E-06	0	0	0	0	0
Depletion of abiotic resources - elements	kg Sb eq	7.09E-06	1.06E-06	9.69E-09	0	0	0	0	0
Depletion of abiotic resources – fossil fuels	MJ	61.25	7.94	0.12	0	0	0	0	0

Environmental impacts, A1-B5: vetonit 5400

Impact category	unit	A1-A3	A4	A5	B1	B2	B3	B4	B5
Global warming	kg CO2 eq	8.39	0.53	0.04	0	0	0	0	0
Ozone depletion	kg CFC 11 eq	8.69E-07	9.59E-08	1.55E-09	0	0	0	0	0
Acidification	kg SO2 eq	3.49E-02	1.73E-03	1.84E-04	0	0	0	0	0
Eutrophication	kg (PO4)3- eq	4.48E-03	3.81E-04	2.34E-04	0	0	0	0	0
Photochemical ozone creation	kg Ethene eq	1.59E-03	8.84E-05	7.59E-06	0	0	0	0	0
Depletion of abiotic resources - elements	kg Sb eq	9.31E-06	1.06E-06	9.69E-09	0	0	0	0	0
Depletion of abiotic resources – fossil fuels	MJ	82.86	7.94	0.12	0	0	0	0	0

Environmental impacts, A1-B5: vetonit 6000

Impact category	unit	A1-A3	A4	A5	B1	B2	B3	B4	B5
Global warming	kg CO2 eq	5.24	0.53	0.04	0	0	0	0	0
Ozone depletion	kg CFC 11 eq	6.49E-07	9.59E-08	1.54E-09	0	0	0	0	0
Acidification	kg SO2 eq	2.40E-02	1.73E-03	1.82E-04	0	0	0	0	0
Eutrophication	kg (PO4)3- eq	3.34E-03	3.81E-04	2.32E-04	0	0	0	0	0
Photochemical ozone creation	kg Ethene eq	1.15E-03	8.84E-05	7.52E-06	0	0	0	0	0
Depletion of abiotic resources - elements	kg Sb eq	5.44E-06	1.06E-06	9.61E-09	0	0	0	0	0
Depletion of abiotic resources – fossil fuels	MJ	37.52	7.94	0.12	0	0	0	0	0

Environmental impacts, A1-B5: vetonit 8000

Impact category	unit	A1-A3	A4	A5	B1	B2	B3	B4	B5
Global warming	kg CO2 eq	7.43	0.53	0.04	0	0	0	0	0
Ozone depletion	kg CFC 11 eq	8.48E-07	9.59E-08	1.55E-09	0	0	0	0	0
Acidification	kg SO2 eq	3.38E-02	1.73E-03	1.84E-04	0	0	0	0	0
Eutrophication	kg (PO4)3- eq	4.28E-03	3.81E-04	2.34E-04	0	0	0	0	0
Photochemical ozone creation	kg Ethene eq	1.53E-03	8.84E-05	7.59E-06	0	0	0	0	0
Depletion of abiotic resources - elements	kg Sb eq	7.62E-06	1.06E-06	9.69E-09	0	0	0	0	0
Depletion of abiotic resources – fossil fuels	MJ	63.50	7.94	0.12	0	0	0	0	0

Environmental impacts, C1-C4: vetonit 3100 - 8000

Impact category	unit	C1	C2	C3	C4	D
Global warming	kg CO2 eq	0.01	0.09	0.11	0	0
Ozone depletion	kg CFC 11 eq	1.92E-09	1.56E-08	2.06E-08	0	0
Acidification	kg SO2 eq	8.07E-05	2.82E-04	8.59E-04	0	0
Eutrophication	kg (PO4)3- eq	1.90E-05	6.20E-05	1.96E-04	0	0
Photochemical ozone creation	kg Ethene eq	2.30E-06	1.44E-05	2.29E-05	0	0
Depletion of abiotic resources - elements	kg Sb eq	2.66E-09	1.73E-07	1.79E-08	0	0
Depletion of abiotic resources – fossil fuels	MJ	0.16	1.29	1.63	0	0

Resource use, A1-B5: vetonit 3100

Resource use	unit	A1-A3	A4	A5	B1	B2	B3	B4	B5
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	MJ	4.3	0.1	0.004	0	0	0	0	0
Use of renewable primary energy resources used as raw materials	MJ	21.5	0	0	0	0	0	0	0
Total use of renewable primary energy resources	MJ	25.8	0.1	0.004	0	0	0	0	0
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	MJ	112.8	8.1	0.1	0	0	0	0	0
Use of non-renewable primary energy resources used as raw materials	MJ	0.9	0	0	0	0	0	0	0
Total use of non-renewable primary energy resources	MJ	113.7	8.1	0.1	0	0	0	0	0
Use of secondary material	kg	0	0	0	0	0	0	0	0
Use of renewable secondary fuels	MJ	0	0	0	0	0	0	0	0
Use of non-renewable secondary fuels	MJ	0	0	0	0	0	0	0	0
Net use of fresh water	m3	0.04	0.002	0.007	0	0	0	0	0

Resource use, A1-B5: vetonit 3300

Resource use	unit	A1-A3	A4	A5	B1	B2	B3	B4	B5
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	MJ	3.4	0.1	0.005	0	0	0	0	0
Use of renewable primary energy resources used as raw materials	MJ	22.4	0	0	0	0	0	0	0
Total use of renewable primary energy resources	MJ	25.6	0.1	0.005	0	0	0	0	0
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	MJ	107.1	8.1	0.1	0	0	0	0	0
Use of non-renewable primary energy resources used as raw materials	MJ	1.0	0	0	0	0	0	0	0
Total use of non-renewable primary energy resources	MJ	108.1	8.1	0.1	0	0	0	0	0
Use of secondary material	kg	0	0	0	0	0	0	0	0
Use of renewable secondary fuels	MJ	0	0	0	0	0	0	0	0
Use of non-renewable secondary fuels	MJ	0	0	0	0	0	0	0	0
Net use of fresh water	m3	0.06	0.002	0.007	0	0	0	0	0

Resource use, A1-B5: vetonit 3400

Resource use	unit	A1-A3	A4	A5	B1	B2	B3	B4	B5
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	MJ	4.2	0.1	0.008	0	0	0	0	0
Use of renewable primary energy resources used as raw materials	MJ	37.3	0	0	0	0	0	0	0
Total use of renewable primary energy resources	MJ	41.5	0.1	0.008	0	0	0	0	0
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	MJ	182.3	8.2	0.2	0	0	0	0	0
Use of non-renewable primary energy resources used as raw materials	MJ	1.6	0	0	0	0	0	0	0
Total use of non-renewable primary energy resources	MJ	183.9	8.2	0.2	0	0	0	0	0
Use of secondary material	kg	0	0	0	0	0	0	0	0
Use of renewable secondary fuels	MJ	0	0	0	0	0	0	0	0
Use of non-renewable secondary fuels	MJ	0	0	0	0	0	0	0	0
Net use of fresh water	m3	0.05	0.002	0.008	0	0	0	0	0

Resource use, A1-B5: vetonit 4100

Resource use	unit	A1-A3	A4	A5	B1	B2	B3	B4	B5
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	MJ	4.0	0.1	0.008	0	0	0	0	0
Use of renewable primary energy resources used as raw materials	MJ	0.5	0	0	0	0	0	0	0
Total use of renewable primary energy resources	MJ	4.5	0.1	0.008	0	0	0	0	0
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	MJ	70.4	7.9	0.1	0	0	0	0	0
Use of non-renewable primary energy resources used as raw materials	MJ	0.9	0	0	0	0	0	0	0
Total use of non-renewable primary energy resources	MJ	71.3	7.9	0.1	0	0	0	0	0
Use of secondary material	kg	0	0	0	0	0	0	0	0
Use of renewable secondary fuels	MJ	0	0	0	0	0	0	0	0
Use of non-renewable secondary fuels	MJ	0	0	0	0	0	0	0	0
Net use of fresh water	m3	0.05	0.002	0.007	0	0	0	0	0

Resource use, A1-B5: vetonit 4400

Resource use	unit	A1-A3	A4	A5	B1	B2	B3	B4	B5
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	MJ	4.5	0.1	0.005	0	0	0	0	0
Use of renewable primary energy resources used as raw materials	MJ	22.3	0	0	0	0	0	0	0
Total use of renewable primary energy resources	MJ	26.8	0.1	0.005	0	0	0	0	0
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	MJ	130.4	8.1	0.1	0	0	0	0	0
Use of non-renewable primary energy resources used as raw materials	MJ	1.0	0	0	0	0	0	0	0
Total use of non-renewable primary energy resources	MJ	131.4	8.1	0.1	0	0	0	0	0
Use of secondary material	kg	0	0	0	0	0	0	0	0
Use of renewable secondary fuels	MJ	0	0	0	0	0	0	0	0
Use of non-renewable secondary fuels	MJ	0	0	0	0	0	0	0	0
Net use of fresh water	m3	0.07	0.002	0.007	0	0	0	0	0

Resource use, A1-B5: vetonit 5000

Resource use	unit	A1-A3	A4	A5	B1	B2	B3	B4	B5
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	MJ	4.0	0.1	0.005	0	0	0	0	0
Use of renewable primary energy resources used as raw materials	MJ	22.4	0	0	0	0	0	0	0
Total use of renewable primary energy resources	MJ	26.4	0.1	0.005	0	0	0	0	0
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	MJ	68.0	8.1	0.1	0	0	0	0	0
Use of non-renewable primary energy resources used as raw materials	MJ	1.0	0	0	0	0	0	0	0
Total use of non-renewable primary energy resources	MJ	69.0	8.1	0.1	0	0	0	0	0
Use of secondary material	kg	0	0	0	0	0	0	0	0
Use of renewable secondary fuels	MJ	0	0	0	0	0	0	0	0
Use of non-renewable secondary fuels	MJ	0	0	0	0	0	0	0	0
Net use of fresh water	m3	0.07	0.002	0.007	0	0	0	0	0

Resource use, A1-B5: vetonit 5400

Resource use	unit	A1-A3	A4	A5	B1	B2	B3	B4	B5
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	MJ	4.3	0.1	0.005	0	0	0	0	0
Use of renewable primary energy resources used as raw materials	MJ	22.4	0	0	0	0	0	0	0
Total use of renewable primary energy resources	MJ	26.7	0.1	0.005	0	0	0	0	0
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	MJ	90.0	8.1	0.1	0	0	0	0	0
Use of non-renewable primary energy resources used as raw materials	MJ	1.0	0	0	0	0	0	0	0
Total use of non-renewable primary energy resources	MJ	91.0	8.1	0.1	0	0	0	0	0
Use of secondary material	kg	0	0	0	0	0	0	0	0
Use of renewable secondary fuels	MJ	0	0	0	0	0	0	0	0
Use of non-renewable secondary fuels	MJ	0	0	0	0	0	0	0	0
Net use of fresh water	m3	0.07	0.002	0.007	0	0	0	0	0

Resource use, A1-B5: vetonit 6000

Resource use	unit	A1-A3	A4	A5	B1	B2	B3	B4	B5
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	MJ	4.0	0.1	0.004	0	0	0	0	0
Use of renewable primary energy resources used as raw materials	MJ	22.2	0	0	0	0	0	0	0
Total use of renewable primary energy resources	MJ	26.2	0.1	0.004	0	0	0	0	0
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	MJ	44.4	8.1	0.1	0	0	0	0	0
Use of non-renewable primary energy resources used as raw materials	MJ	0.9	0	0	0	0	0	0	0
Total use of non-renewable primary energy resources	MJ	45.3	8.1	0.1	0	0	0	0	0
Use of secondary material	kg	0	0	0	0	0	0	0	0
Use of renewable secondary fuels	MJ	0	0	0	0	0	0	0	0
Use of non-renewable secondary fuels	MJ	0	0	0	0	0	0	0	0
Net use of fresh water	m3	0.07	0.002	0.007	0	0	0	0	0

Resource use, A1-B5: vetonit 8000

Resource use	unit	A1-A3	A4	A5	B1	B2	B3	B4	B5
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	MJ	4.1	0.1	0.005	0	0	0	0	0
Use of renewable primary energy resources used as raw materials	MJ	22.4	0	0	0	0	0	0	0
Total use of renewable primary energy resources	MJ	26.5	0.1	0.005	0	0	0	0	0
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	MJ	70.5	8.1	0.1	0	0	0	0	0
Use of non-renewable primary energy resources used as raw materials	MJ	1.0	0	0	0	0	0	0	0
Total use of non-renewable primary energy resources	MJ	71.5	8.1	0.1	0	0	0	0	0
Use of secondary material	kg	0	0	0	0	0	0	0	0
Use of renewable secondary fuels	MJ	0	0	0	0	0	0	0	0
Use of non-renewable secondary fuels	MJ	0	0	0	0	0	0	0	0
Net use of fresh water	m3	0.07	0.002	0.007	0	0	0	0	0

Resource use, C1-C4: vetonit 3100 - 8000

Resource use	unit	C1	C2	C3	C4	D
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	MJ	0.001	0.02	0.01	0	0
Use of renewable primary energy used as raw materials	MJ	0	0	0	0	0
Total use of renewable primary energy resources	MJ	0.001	0.02	0.01	0	0
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	MJ	0.16	1.32	1.65	0	0
Use of non-renewable primary energy used as raw materials	MJ	0	0	0	0	0
Total use of non-renewable primary energy resources	MJ	0.16	1.32	1.65	0	0
Use of secondary material	kg	0	0	0	0	0
Use of renewable secondary fuels	MJ	0	0	0	0	0
Use of non-renewable secondary fuels	MJ	0	0	0	0	0
Net use of fresh water	m3	0.00003	0.00028	0.00028	0	0

Waste categories: vetonit 3100 - 8000

Waste categories	unit	A1-A3	A4	A5	B1	B2	B3	B4	B5
Hazardous waste disposed	kg	0.001	0	0	0	0	0	0	0
Non-hazardous waste disposed	kg	6,7	0	0	0	0	0	0	0
Radioactive waste disposed	kg	0	0	0	0	0	0	0	0

Waste categories	unit	C1	C2	C3	C4	D
Hazardous waste disposed	kg	0	0	0	0	0
Non-hazardous waste disposed	kg	0	0	0	0	0
Radioactive waste disposed	kg	0	0	0	0	0

Other output flows: vetonit 3100 - 8000

Other output flows	unit	A1-A3	A4	A5	B1	B2	B3	B4	B5
Components for re-use	kg	0	0	0	0	0	0	0	0
Materials for recycling	kg	0.02	0	0 - 0,01	0	0	0	0	0
Materials for energy recovery	kg	0.02	0	0.02 - 1.3	0	0	0	0	0
Exported energy	MJ	0	0	0	0	0	0	0	0

Other output flows	unit	C1	C2	C3	C4	D
Components for re-use	kg	0	0	0	0	0
Materials for recycling	kg	0	0	34	0	0
Materials for energy recovery	kg	0	0	0	0	0
Exported energy	MJ	0	0	0	0	0

This EPD doesn't present the benefits or scenarios outside the lifecycle according module D (Reuse, Recovery Recycling). Since no scenarios are presented, the value of module D is zero (0) in all environmental impact categories.

Additional information

Technical information, transport to the site (A4)

Parameter	Unit
Vehicle type and fuel	Truck-trailer, Euro 5, 16 - 32 t, diesel
Load capacity	37 % (Ecoinvent 3.2)
Distance	90 km
Bulk density	1700 kg/m^3

Process description of the end-of-life stage (C1-C4)

Input/Output	Dataset	Year (dataset)	Amount	Unit
Excavation (C1)	Excavation, hydraulic digger {RER}| processing | Alloc Rec, U	2016	100	%
de-construction site – waste treatment (C2)	50 % processed on-site, 50 % transport to separate location max. 30 km distance, Transport, freight, lorry 16-32 metric ton, EURO5 {RER}| transport, freight, lorry 16-32 metric ton, EURO5 | Alloc Rec, U	2016	30	km
Recycling (C3)	Waste brick {CH}| treatment of, recycling | Alloc Rec, U	2016	100	%
Landfill disposal (C4)	Based on the quality of crushed concrete/brick waste, 100% recycling is possible. No waste to landfill.	2016	0	%

Additional information during the use stage

Regarding indoor air quality the flooring products have a M1 emission classification granted by the Building Information Foundation RTS sr (Rakennustietosäätiö RTS sr). M1 stands for low emissions.

All the products are considered as low alkaline (pH < 11).

The products are fast setting and fast drying enabling time and energy savings throughout the construction process.

Annex

1. Conversion table. The table conversion factor can be used to calculate the results of a life cycle assessment in a situation where the thickness of the floor screed differs from 20 mm. The result of the life cycle assessment is simply multiplied by the conversion factor.

References

1. RTS. PCR protocol: EPDs published by the Building Information Foundation RTS sr (2016)
2. EN 15804: Sustainability of construction works - Environmental product declaration - Core rules of the product category of construction products (2014)
3. ISO 14025: Environmental labels and declarations - Type III environmental declarations - Principles and procedures (2006)
4. ISO 14040: Environmental management - Life Cycle Assessment - Principles and framework (2006)
5. ISO 14044: Environmental management - Life Cycle Assessment - Requirements and guidelines (2006)
6. LCA report: Saint-Gobain Rakennustuotteet Oy/ Weber – Hand-applied floor leveling products. (2017)

Annex 1

Conversion table. The table conversion factor can be used to calculate the results of a life cycle assessment in a situation where the thickness of the floor screed differs from 20 mm. The result of the life cycle assessment is simply multiplied by the conversion factor.

Thickness of the floor screed (mm)	Conversion factor that LCA results should be multi-plied	Floor screed dry weight per square meter (kg/m^2)
5	0,25	8,5
10	0,5	17
15	0,75	25,5
20	1	34
25	1,25	42,5
30	1,5	51
35	1,75	59,5
40	2	68
45	2,25	76,5
50	2,5	85
60	3	102
70	3,5	119
80	4	136
90	4,5	153
100	5	170
110	5,5	187
120	6	204
130	6,5	221
140	7	238
150	7,5	255
160	8	272
170	8,5	289
180	9	306
190	9,5	323
200	10	340

210	10,5	357
220	11	374
230	11,5	391
240	12	408
250	12,5	425