Environmental Product Declaration

EPD®

ECO PLATFORM
EPD
VERIFIED

In accordance with ISO 14025 and EN 15804:2012+A2:2019 for:
Single product

FPS Fire Stop Mortar

From

SMP PUTSPRODUKTER

Programme:	The International EPD® System, www.environdec.com
Programme operator:	EPD International AB
EPD registration number:	S-P-12674
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An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at www.environdec.com

General information

Programme information

Programme:	The International EPD® System
Address:	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
Website:	www.environdec.com
E-mail:	info@environdec.com

Accountabilities for PCR, LCA and independent, third-party verification
Product Category Rules (PCR)
CEN standard EN 15804 serves as the Core Product Category Rules (PCR)
Product Category Rules (PCR): *PCR 2019:14 Construction products (EN 15804:A2) (1.3.2)*
PCR review was conducted by: *CEN Technical Committee* *The review panel may be contacted via the Secretariat www.environdec.com/contact.*
Life Cycle Assessment (LCA)
LCA accountability: *Tyréns Sverige AB*
Third-party verification
Independent third-party verification of the declaration and data, according to ISO 14025:2006, via: ☒ EPD verification by individual verifier Third-party verifier: *Daniel Böckin, Miljögiraff AB* Approved by: The International EPD® System
Procedure for follow-up of data during EPD validity involves third party verifier: ☐ Yes   ☒ No

The EPD owner has the sole ownership, liability, and responsibility for the EPD.

EPDs within the same product category but registered in different EPD programs, or not compliant with EN 15804, may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same version number) or be based on fully-aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterization factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.

Company information

Owner of the EPD: SMP Putsprodukter AB

Contact:
Jan Larsson, SMP Putsprodukter AB
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Description of the organisation:
SMP Putsprodukter operates its production facility in Rosersberg, where it manufactures masses for fire protection sealing. In addition to this, SMP Putsprodukter also produces gypsum plaster and primer. Furthermore, through its subsidiary Stuckbema AB, they offer expertise from a skilled team of stucco artisans and plasterers. This versatile group works on everything from elegant stucco work to customized acoustic solutions for both private individuals and businesses.

Name and location of production site(s):
Tallbacksgatan 11, 195 72 Rosersberg, Sweden

Product information

Product name: FPS Fire stop mortar
Product description: FPS fire stop mortar is a high-quality and easy-to-work-with product that meets today's high demands in both fire protection and environmental standards. The fire stop mortar is used to seal and around ventilation, pipes and cables in order to fire-proof. ETA 20-0464, Class A1 compliant with EN13501-1-1:2019, tested according to EN1366-3, certified by Basta, Sunda hus, LEED, and BREEAM. The product is listed in the Building Product Portal and can be used in Swan-labelled constructions.
UN CPC code: 375

Geographical scope:
The EPD is representative for the Swedish and Finnish market.
Module A1 and A2 Material suppliers are European
Module A3 production is located in Sweden
Module C and D scenarios are for Sweden.

LCA information

Functional unit / declared unit: 1 kg of fire stop mortar

Reference service life: Not declared

Time representativeness: The LCA is based on production data from 2023, but is deemed to be representative of an average year of production.
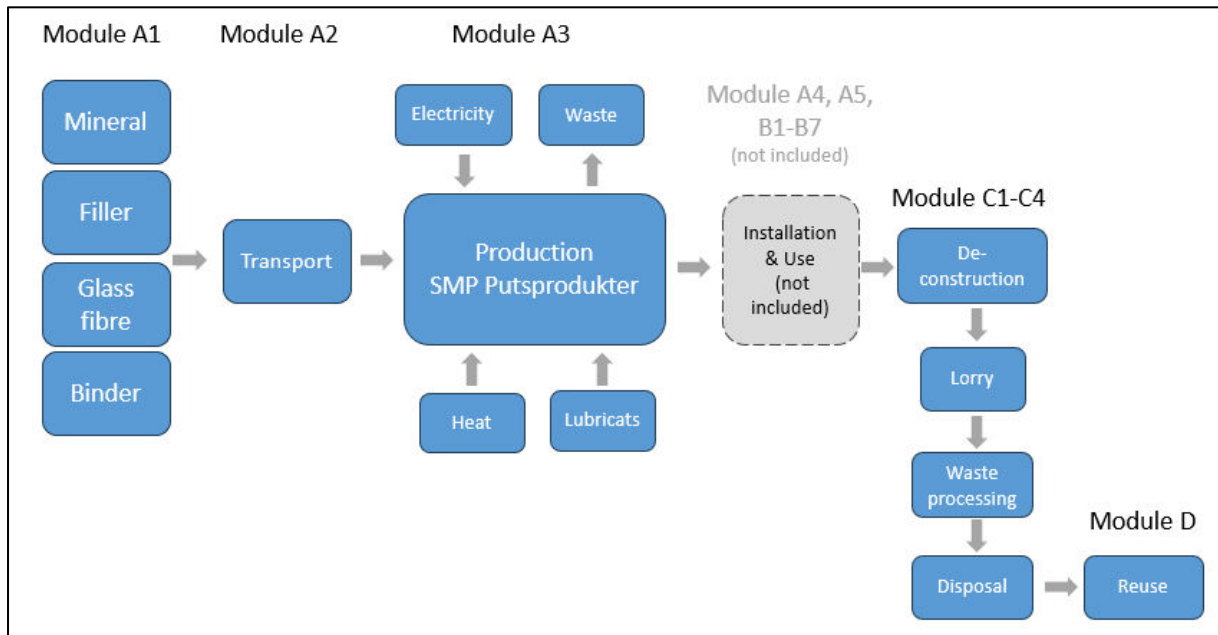
Database(s) and LCA software used: The LCA software is SimaPro Flow and the database is Ecoinvent 3.9.1. When modelling in Simapro, Ecoinvent data (updated December 2022) has been used for generic data.

Description of system boundaries:
Cradle to gate (A1-A3), end of life (C1–C4) and benefits beyond system boundary (D)

(A1–A3 + C + D)

System diagram:

Production

Main materials used for production:

- Mineral: Mineral from French supplier.
- Filler: Filler from Danish supplier.
- Binder: Binder from French supplier.
- Glass fibre: Glass fibre from Polish supplier.

All raw materials are processed in the production facility of SMP Putsprodukter in Rosersberg, Sweden. The product is produced by blending the ingredients in a mixer, followed by manual filling sacks with the finished product. The production facility utilizes gas powered trucks.

The product is delivered to the customer in paper sacks containing 12 kg of FPS Fire stop mortar.

More information:

LCA practitioner: Moa Mellberg and Johan Albihn at Tyréns Sverige AB

The infrastructure or capital goods used in the product system for underlying processes are included, as infrastructure or capital goods can NOT be excluded in SimaPro FLOW. Therefore results of the impact categories abiotic depletion of minerals and metals, land use, human toxicity (cancer), human toxicity, noncancer and ecotoxicity (freshwater) may be highly uncertain in LCAs that include capital goods/infrastructure in generic datasets, in case infrastructure/capital goods contribute greatly to the total results. This is because the LCI data of infrastructure/capital goods used to quantify these indicators in currently available generic datasets sometimes lack temporal, technological and geographical representativeness. Caution should be exercised when using the results of these indicators for decision-making purposes

EN 15804 reference package based on EF 3.1 has been used.

Electricity data

SMP Putsprodukter AB has 100 percent original marked electricity. The company purchases electricity produced from renewable resources from Fortum. The energy mix purchased is 98% Hydro power 1 % solar energy and 1 % wind power. Infrastructure and net losses for high and medium net are included together with transformation losses when going from high voltage to medium voltage. Climate impact for the green energy mix is 0,055 kg CO_2eq. per kWh (GWP-100 IPCC2021).

Estimates and assumptions

• To convert the value in the EPD for binder from m² to kg, an average value of 1.95 kg/ m² is used, A1.

• The lubricant used at production site is assumed to have a density of 0.8 kg/l, A3.

• Truck transports within Europe is assumed to have class EURO 5 and within Sweden EURO 6.

• 80 % of the FPS Fire stop mortar is assumed to be recycled, C3. The remaining 20% of the product is assumed to be sent to landfill, as it is considered a product that is unfit to incinerate.

• The material loss in the recycling process of FPS Fire stop mortar, the Y-factor, is assumed to be 5%, D.

• The recycled FPS Fire stop mortar are replacing production of primary gypsum, D.

• Waste scenarios used for the Swedish conditions C1-C4, D are assumed to be representative also for Finnish conditions.

Background data

The data quality of the background data is considered good. The assessment considers all available data from the production process, including all raw materials and auxiliary materials used as well as the energy consumption in relation to available Ecoinvent 3.9.1 datasets and EPD's.

Data quality

When modeling in Simapro, Ecoinvent data (updated December 2022) has been used for generic data. The database is considered to be of high quality. For some material supplier's product specific and third party verified EPD's have been used. The EPD's used is of high quality.

More than 90% specific data in this EPD. Data is gathered from the actual manufacturing plant with product-specific processes, specific waste and spillage %, specific energy mix, specific transportation distances and transportation type and EPD's from two of the four material suppliers.

Modules declared, geographical scope, share of specific data (in GWP-GHG results) and data variation (in GWP-GHG results):

| Module | Product stage | | | Construction process stage | | Use stage | | | | | | | End of life stage | | | | Resource recovery stage |
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
Module	**A1**	**A2**	**A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Modules declared	X	X	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X
Geography	EU	EU	SE	ND	ND	ND	ND	ND	ND	ND	ND	ND	SE/FI	SE/FI	SE/FI	SE/FI	SE/FI
Specific data used	> 90%*			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	not relevant			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	not relevant			-	-	-	-	-	-	-	-	-	-	-	-	-	-

*See Data quality

Content information

Product components	Weight, kg	Post-consumer material, weight-%	Biogenic material, weight % and kg C/declared unit
Glass fibre	3.33E-03	0.00 %	0.00 %
Filler	6.17E-02	0.00 %	0.00 %
Mineral	8.08E-01	0.00 %	0.00 %
Binder	1.27E-01	0.00 %	0.00 %
TOTAL	1.00E+00	0.00 %	0.00 %

Packaging materials	Weight, kg	Weight-% (versus the product)	Weight biogenic carbon, kg C/declared unit
Paper bag	1.49E-02	1.49 %	0.01
Cotton	8.33E-05	0.01 %	0.00
TOTAL	1.50E-02	1.50 %	0.00

Dangerous substances from the candidate list of SVHC for Authorisation	EC No.	CAS No.	Weight-% per functional or declared unit
not relevant	-	-	-

Environmental Information

Potential environmental impact – mandatory indicators according to EN 15804

Results per kg							
Indicator*	Unit	A1-A3***	C1	C2	C3	C4	D
GWP-fossil	kg CO_2 eq.	4.09E-01	0.00E+00	9.24E-03	3.50E-03	1.17E-03	-4.39E-03
GWP-biogenic***	kg CO_2 eq.	0.00E+00	0.00E+00	8.46E-06	5.85E-05	3.62E-06	0.00E+00
GWP-luluc	kg CO_2 eq.	1.24E-02	0.00E+00	4.56E-06	5.57E-07	2.33E-07	-8.58E-07
GWP-total	kg CO_2 eq.	4.11E-01	0.00E+00	9.25E-03	3.56E-03	1.17E-03	-4.39E-03
ODP	kg CFC 11 eq.	8.21E-09	0.00E+00	2.01E-10	6.10E-11	4.13E-11	-6.87E-11
AP	mol H^+ eq.	1.35E-03	0.00E+00	2.02E-05	3.24E-05	7.46E-06	-6.45E-05
EP-freshwater	kg P eq.	5.67E-05	0.00E+00	6.57E-07	2.25E-07	5.52E-08	-2.10E-07
EP-marine	kg N eq.	5.11E-04	0.00E+00	5.09E-06	1.46E-05	3.24E-06	-2.57E-05
EP-terrestrial	mol N eq.	4.78E-03	0.00E+00	5.18E-05	1.58E-04	3.48E-05	-3.24E-04
POCP	kg NMVOC eq.	1.87E-03	0.00E+00	3.13E-05	4.70E-05	1.40E-05	-8.05E-05
ADP-minerals&metals**	kg Sb eq.	2.78E-06	0.00E+00	3.02E-08	1.38E-08	1.26E-09	-5.89E-09
ADP-fossil**	MJ	5.85E+00	0.00E+00	1.31E-01	5.43E-02	3.02E-02	-5.82E-02
WDP	m^3	4.37E-01	0.00E+00	7.71E-04	1.25E-03	1.53E-03	-5.28E-04
Acronyms		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					

Disclaimer: The results of modules A1-A3 should not be used without considering the results of module C

* The estimated impact results are only relative statements, which do not indicate the endpoints of the impact categories, exceeding threshold values, safety margins and/or risks.

**Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.

*** A1-A3 results includes the "balancing-out reporting" of the biogenic CO2 of packaging released in module A5

![EPD logo]

Potential environmental impact – additional mandatory and voluntary indicators

Results per kg							
Indicator	Unit	A1-A3	C1	C2	C3	C4	D
GWP-GHG	kg CO_2 eq.	4.22E-01	0.00E+00	9.24E-03	3.50E-03	1.17E-03	-4.39E-03

Disclaimer: The results of modules A1-A3 should not be used without considering the results of module C

Use of resources

Results per kg							
Indicator	Unit	A1-A3	C1	C2	C3	C4	D
PERE	MJ	1.91E+00	0.00E+00	2.06E-03	9.89E-03	5.96E-04	-2.66E-03
PERM*	MJ	4.98E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	1.96E+00	0.00E+00	2.06E-03	9.89E-03	5.96E-04	-2.66E-03
PENRE	MJ	6.30E+00	0.00E+00	1.39E-01	5.72E-02	3.21E-02	-6.18E-02
PENRM*	MJ.	3.26E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	MJ	6.34E+00	0.00E+00	1.39E-01	5.72E-02	3.21E-02	-6.18E-02
SM	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	0.00E+00	0.00E+00	0.00E+00	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	0.00E+00
FW	m^3	5.94E+00	0.00E+00	1.63E-02	1.16E-01	4.40E-03	-3.06E-02
Acronyms		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 excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water					

Disclaimer: The results of modules A1-A3 should not be used without considering the results of module C

*For the PERM and PENRM the new "GUIDANCE TO CALCULATING THE PRIMARY ENERGY USE INDICATORS" in Annex 3 of the PCR is followed and calculated according to option A.

Waste production and output flows

Waste production

Results per kg						
Indicator	**Unit**	**A1-A3**	**C1**	**C2**	**C3**	**C4**	**D**
Hazardous waste disposed	kg	5.92E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Non-hazardous waste disposed	kg	5.30E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Radioactive waste disposed	kg	2.82E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Disclaimer: The results of modules A1-A3 should not be used without considering the results of module C

Output flows

Results per kg						
Indicator	**Unit**	**A1-A3**	**C1**	**C2**	**C3**	**C4**	**D**
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Material for recycling	kg	3.23E-03	0.00E+00	0.00E+00	8.00E-01	0.00E+00	0.00E+00
Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy, electricity	MJ	1.66E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy, thermal	MJ	2.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Disclaimer: The results of modules A1-A3 should not be used without considering the results of module C

Additional information

Additional environmental impact categories were calculated in the LCA but not presented in the EPD.

References

EcoInvent (2023). EcoInvent 3.9.1. https://ecoinvent.org/the-ecoinvent-database/data-releases/ecoinvent-3-9-1/

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SIS (2010). SS-EN ISO 14025:2010, Environmental labels and declarations – Type III environmental declarations – Principles and procedures. Svenska Institutet för Standarder