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ECO PLATFORM EPD EN 15804 VERIFIED

Owner: fade Acoustic Ceilings Europe ApS
No.: MD-19001-EN
ECO EPD: 00000907
Issued: 09-04-2019
Valid to: 09-04-2024

3rd PARTY **VERIFIED**

EPD

VERIFIED ENVIRONMENTAL PRODUCT DECLARATION | **ISO 14025 & EN 15804**

Owner of declaration
fade Acoustic Ceilings Europe ApS
CVR: 36454881

Programme operator
Danish Technological Institute
www.dti.dk

Programme
EPD Danmark
www.epddanmark.dk

Declared products
Acoustic plaster sprays
- fade® Acoustic - Albus
- fade® Acoustic - Plus+

Production site
South of Copenhagen, Denmark

Products use
As an acoustic plaster solution spray applied to walls and ceilings, its absorbent qualities allow for acoustic control in a wide-range of developments, from historic buildings to high-end residential, commercial, retail and educational spaces. The plaster can be applied on any surface including straight and curved walls, dramatic angles and arching domes.

Declared unit
1 kg

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Basis of calculation
This EPD is developed in accordance with the European standard EN 15804.

Comparability
EPDs of construction products may not be comparable if they do not comply with the requirements in EN 15804. EPD data may not be comparable if the datasets used are not developed in accordance with EN 15804 and if the background systems are not based on the same database.

Validity
This EPD has been verified in accordance with ISO 14025 and is valid for 5 years from the date of issue.

Use
The intended use of an EPD is to communicate scientifically based environmental information for construction products, for the purpose of assessing the environmental performance of buildings.

EPD type
☒Cradle-to-gate
☐Cradle-to-gate with options
☐Cradle-to-grave

CEN standard EN 15804 serves as the core PCR

Independent verification of the declaration and data, according to EN ISO 14025

☐ internal ☒ external

Third party verifier:

Kim Christiansen

Henrik Fred Larsen
EPD Danmark

Life cycle stages and modules (MND = module not declared)																
Product			Construction process		Use							End of life				Beyond the system boundary
Raw material supply	Transport	Manufacturing	Transport	Installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Re-use, recovery and recycling potential
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
X	X	X	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND

Product information

Product description

The main product components are shown in the table below. Specific recipes are not shown in this table due to reasons of confidentiality.

Material	Weight-% of declared product	
	fade® Acoustic - Albus	fade® Acoustic -Plus+
Water	76	77
Biocide	<1	<1
Bentonite	3	3
Binder	<1	<1
Defoamer	<1	<1
Glass fibre	5	4
Titanium dioxide	2	2
Perlite, expanded	13	13
Packaging material	**[kg] per declared unit**	
Polypropylene	0,0178	0,0004
Polyethylene	0,0033	0,0141
Cardboard	0,0007	0,0030

Representativity

This declaration, including data collection and the modeled foreground system including results, represents the production of 1 kg of fade® acoustic plasters at the production site located south of Copenhagen in Denmark. Product specific data are based on average values collected in the period 01.09.2017-31.08.2018. Background data are based mainly on GaBi database 8.7 and are less than 10 years old. In few cases, GaBi data were supplemented with data from Ecoinvent 3.4. Generally, the used background datasets are of high quality, and the majority of the datasets are only a couple of years old – thus the requirements in EN15804 are met.

Dangerous substances

fade® acoustic plasters do not contain substances listed in the ”Candidate List of Substances of Very High Concern for authorisation”

(http://echa.europa.eu/candidate-list-table)

Essential characteristics (CE)

fade® acoustic plasters are covered by an EAD (Export Accompanying document) 35.06.10.00.

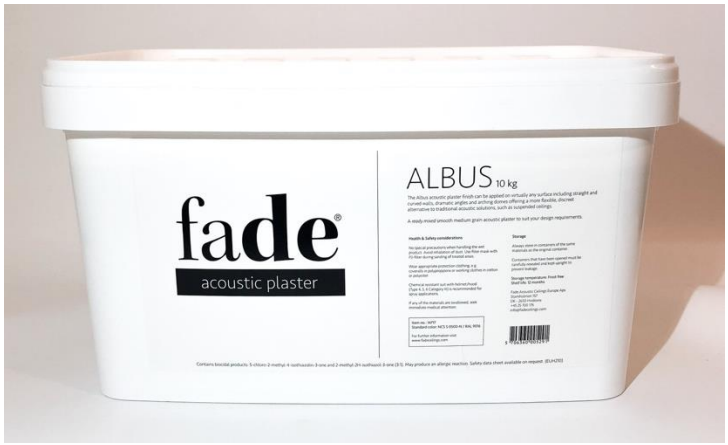
Technical information can be obtained by contacting the manufacturer or on the manufacturers website:

https://fadeceilings.com/

Reference Service Life (RSL)

No RSL is declared. This EPD is based on a cradle-to-gate assessment.

Product Illustrations



LCA background

Declared unit

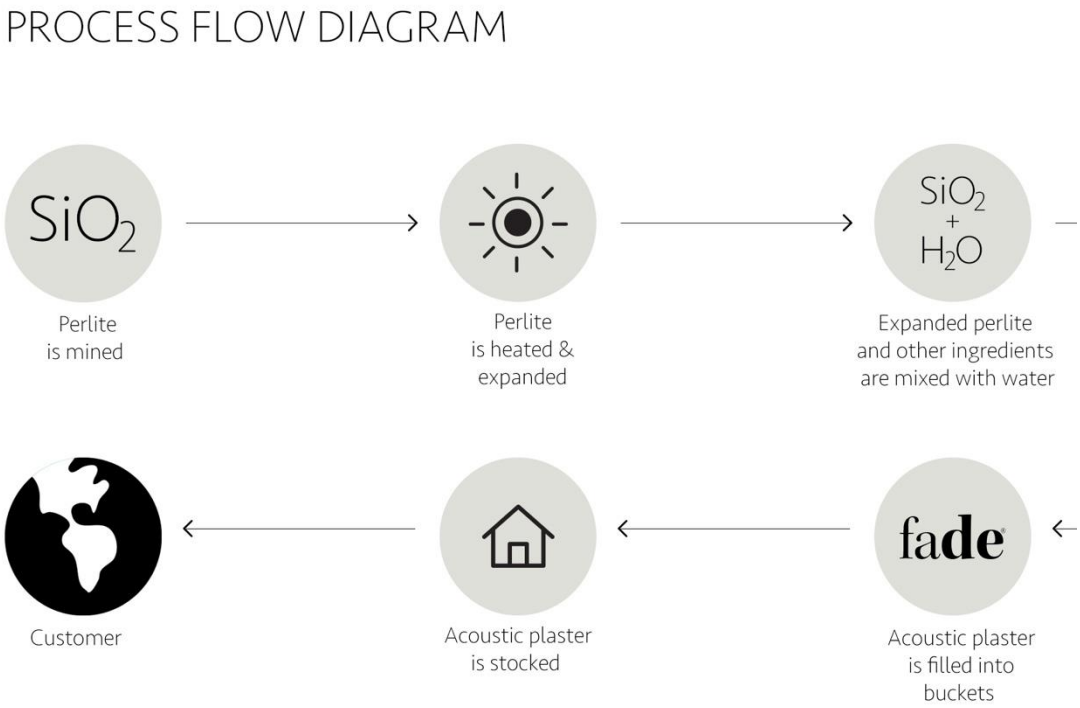
The LCI and LCIA results in this EPD relates to 1kg of fade® acoustic plasters of the type Albus and Plus+.

	Albus	Plus+	Unit
Declared unit	1	1	Kg
Conversion factor to 1 kg	-	-	-
Usage yield	3,3	2,5	kg/m^2

PCR

This EPD is developed according to the core rules for the product category of construction products in EN 15804.

Flow diagram



System boundaries

This EPD is based on a cradle-to-gate LCA, in which >99 weight-% has been accounted for.

The general rules for the exclusion of inputs and outputs follows the requirements in EN 15804, 6.3.5, where the total of neglected input flows per module shall be a maximum of 5 % of energy usage and mass and 1 % of energy usage and mass for unit processes.

Product stage (A1-A3) includes:

A1 – Extraction and processing of raw materials
A2 – Transport to the production site
A3 – Manufacturing processes

The product stage comprises the acquisition of all raw materials, products and energy, transport to the production site, packaging and waste processing up to the ”end-of-waste” state or final disposal. The LCA results are declared in aggregated form for the product stage, which means, that the sub-modules A1, A2 and A3 are declared as one module A1-A3.

The raw materials of fade® acoustic plaster are stored in a warehouse at the production facility. Production occurs at intervals throughout the year where acoustic plasters are made in bulk. Of these bulk, 20% of final products are delivered directly to fade®’s customers, the other 80% of the final product is stored at fade®’s local warehouse in Sweden.

The production of the plaster is done automatically, using two weights and two mixers. When these are not used for production of fade®'s plasters, they are used for other products in the facilities production line.

The production is done using a unique prescription code, enabling the machines to mix the plasters fully automatic, according to the content distribution. When mixed, the setup for production is filled on either of the packaging types: PP buckets or PE bags.

The warehouse distribution leads to an added transport 'to gate', which is evenly distributed on all products (averaged for the functional unit). As the warehouse of fade® is located in Eslöv, Sweden.

The gate (defined by the LCA boundary) for the final acoustic plaster products is set at respectively the production facility south of Copenhagen, Denmark (for 20% of the final output) thus with an additional transport of 0km, and at the fade® warehouse in Sweden (for 80% of the final output) thus applying additional transport of 110km.

LCA results

ENVIRONMENTAL IMPACTS PER KG OF ACOUSTIC PLASTER			
Parameter	**Unit**	**fade® Acoustic - Albus**	**fade® Acoustic - Plus+**
		A1-A3	**A1-A3**
GWP	[kg CO_2-eq.]	4,53E-01	4,03E-01
ODP	[kg CFC11-eq.]	3,59E-08	3,24E-08
AP	[kg SO_2-eq.]	2,21E-03	1,96E-03
EP	[kg PO_4^{3-}-eq.]	1,03E-03	9,17E-04
POCP	[kg ethene-eq.]	2,10E-04	1,77E-04
ADPE	[kg Sb-eq.]	5,84E-06	5,09E-06
ADPF	[MJ]	6,98E+00	6,20E+00
Caption	GWP = Global warming potential; ODP = Ozone depletion potential; AP = Acidification potential of soil and water; EP = Eutrophication potential; POCP = Photochemical ozone creation potential; ADPE = Abiotic depletion potential for non fossil resources; ADPF = Abiotic depletion potential for fossil resources		

RESOURCE USE PER KG OF ACOUSTIC PLASTER			
Parameter	**Unit**	**fade® Acoustic - Albus**	**fade® Acoustic - Plus+**
		A1-A3	**A1-A3**
PERE	[MJ]	1,39E+00	1,30E+00
PERM*	[MJ]	1,68E-02	5,21E-02
PERT	[MJ]	1,40E+00	1,35E+00
PENRE	[MJ]	6,57E+00	5,88E+00
PENRM**	[MJ]	1,12E+00	8,86E-01
PENRT	[MJ]	7,69E+00	6,77E+00
SM	[kg]	0,00E+00	0,00E+00
RSF	[MJ]	0,00E+00	0,00E+00
NRSF	[MJ]	0,00E+00	0,00E+00
FW	[m^3]	6,37E-03	5,70E-03
Caption	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 resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non renewable secondary fuels; FW = Use of net fresh water		

** Equals contribution from packaging material of raw material (Albus=5.83E-03 MJ, Plus+=5.52E-03 MJ) and packaging material of plaster products (Albus=1.10E-2 MJ, Plus+4.66E-02 MJ)*

*** Contribution from packaging material of raw material (Albus=1.44E-01 MJ, Plus+=1.86E-01 MJ) and packaging material of plaster products (Albus=9.74E-01 MJ, Plus+=7.00E-01)*

WASTE CATEGORIES AND OUTPUT FLOWS PER KG OF ACOUSTIC PLASTER			
Parameter	**Unit**	**fade® Acoustic - Albus**	**fade® Acoustic - Plus+**
		A1-A3	**A1-A3**
HWD	[kg]	4,54E-08	5,00E-08
NHWD	[kg]	1,61E-02	1,45E-02
RWD	[kg]	1,15E-04	7,63E-05
CRU	[kg]	-	-
MFR	[kg]	-	-
MER	[kg]	-	-
EEE	[MJ]	-	-
EET	[MJ]	-	-
Caption	HWD = Hazardous waste disposed; NHWD = Non hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy		

Additional information

Indoor air

The EPD does not give information on release of dangerous substances to indoor air because the horizontal standards on measurement of release of regulated dangerous substances from construction products using harmonised test methods according to the provisions of the respective technical committees for European product standards are not available.

Soil and water

The EPD does not give information on release of dangerous substances to soil and water because the horizontal standards on measurement of release of regulated dangerous substances from construction products using harmonised test methods according to the provisions of the respective technical committees for European product standards are not available.

References

Publisher	epddanmark http://www.epddanmark.dk
Programme operator	Danish Technological Institute Buildings & Environment Gregersensvej DK-2630 Taastrup http://www.teknologisk.dk
LCA-practitioner	Danish Technological Institute Buildings & Environment Gregersensvej DK-2630 Taastrup http://www.teknologisk.dk
LCA software /background data	Thinkstep GaBi 8.7 2019 incl. databases + Ecoinvent 3.4 2017 http://www.gabi-software.com http://www.ecoinvent.org
3rd party verifier	Kim Christiansen – kimconsult.dk

General programme instructions
Version 1.9
www.epddanmark.dk

EN 15804:2012 + A1:2013
DS/EN 15804 + A1:2013 - "Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products"

EN 15942
DS/EN 15942:2011 – " Sustainability of construction works – Environmental product declarations – Communication format business-to-business"

ISO 14025
DS/EN ISO 14025:2010 – " Environmental labels and declarations – Type III environmental declarations – Principles and procedures"

ISO 14040
DS/EN ISO 14040:2008 – " Environmental management – Life cycle assessment – Principles and framework"

ISO 14044
DS/EN ISO 14044:2008 – " Environmental management – Life cycle assessment – Requirements and guidelines"