



# AdvancedEPD for Fixit 222 Aerogel High Performance Insulating Plaster

## Environmental Product Declaration (EPD)

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### Manufacturer of Declared Product

Fixit AG, Haldenstrasse 5, 6340 Baar, Switzerland

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### Declared Product

Fixit 222 Aerogel High Performance Insulating Plaster

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### Scope of the EPD

This EPD is based on ISO 14'025 but is not part of a Type III environmental declaration program referred to therein. It describes the environmental impacts of the above named product. Its purpose is to promote production of environmentally friendly products. All relevant environmental data is disclosed in this declaration. Comparisons of the environmental impacts declared in this EPD should only be made with products of a similar function.

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### Validity

This declaration is only valid for the above named product. If the composition of the product is changed this EPD will be no longer valid and must be updated. This EPD must in any event be reviewed no later than 20 February 2023 (after three years) in order to extend its validity for another three years.

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### Declarant

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### Declaration Number

AEPDFIX15001

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### Place and Date

Basel, 20 February 2020

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### Signatures



Cornelia Stettler



Lea Weber

An AdvancedEPD is an environmental product declaration based on ISO 14'025 but is not part of a Type III environmental declaration program referred to therein. It has been prepared by Carbotech AG independently and with all reasonable skill, care and diligence using all reasonably available, current and appropriate tools and basic data. Carbotech AG uses all available and relevant manufacturer specific data and also collects environmentally important data for relevant upstream processes from the respective enterprises. This data is linked with production processes from the international database for life cycle assessment Ecoinvent. The correlated uncertainties are displayed in the results. Carbotech AG bases the EPD on existing Product Category Rules (PCR), where possible. The calculations are documented in a LCA report.

### Product Description

The Fixit 222 aerogel high performance insulating plaster is an innovation in the field of insulating plaster. By using aerogel, Fixit 222 attains a much lower thermal conductivity than other commercially available insulating plasters, enabling older buildings, as well as historical buildings and buildings with protected status, to be renovated to a high energy efficient standard without losing the architectural details of the walls. Indeed, architectural details can be restored true to original and imperfections filled to millimeter precision.

Technical information about the products can be found in the Fixit product technical information sheets.

### Composition Information

Raw Materials:		
	Calciumhydrate	25 % – 50 %
	Dicalciumsilicate hydrate	10 % – 25 %
	Pozzolane	2.5 % – 10 %
	White cement	2.5 % – 10 %
	Limestone	≤2.5 %
	Silica, [(trimethylsilyl)oxy]-modified	25 % – 50 %

### Scope of the LCA

The data used to carry out the LCA was obtained from Fixit AG and relates to the year 2019. Also average data from the Ecoinvent v3.5 inventory was used to calculate the environmental impact of the raw materials. However, due to its high environmental importance, the production data for aerogel was collected directly from the producer (data from 2013).

1 kg of the product was chosen as the declared unit.

In this EPD the results represent the production phase including packaging of the product and all relevant upstream processes such as raw material production or transport (“cradle to gate”, use phase and disposal were not included). This complies with the requirements of EN 15804 for an EPD for the production phase (product stage A1-A3).

The environmental impacts of the relevant material and energy flows were calculated in the LCA. The environmental evaluation was performed according to ISO Norm 14'040 ff. Detailed documentation for the LCA including the results for all life cycle phases can be found in a separate report “LCA of Fixit 222 Aerogel High Performance Insulating Plaster”.

All primary data was reviewed and checked for plausibility by Carbotech AG. Carbotech AG can therefore ensure that this EPD has been carried out to the best of their knowledge and belief.

### EPD Results “cradle to gate” (A1–A3 according to EN15804)

Impact Category	Unit	Value per kg	Method Reference
Global Warming Potential (GWP)	kg CO <sub>2</sub> -Equiv.	4.39	IPCC 2013
Primary energy (I <sub>prim</sub> )	MJ- Equiv.	64.52	ecoinvent 3.5
Primary energy, renewable	MJ- Equiv.	5.31	ecoinvent 3.5
Primary energy, non-renewable	MJ- Equiv.	59.20	ecoinvent 3.5
Acidification potential (AP)	kg SO <sub>2</sub> -Equiv.	0.0139	CML 2001
Eutrophication potential (EP)	kg PO <sub>4</sub> -Equiv.	0.0023	CML 2001
Ozone layer depletion potential (ODP)	kg CFC-11 Equiv.	0.0000018	CML 2001
Photochemical ozone creation potential (POCP)	kg C <sub>2</sub> H <sub>4</sub> Equiv.	0.000633	CML 2001

### Energy Pay-back time

The energy pay-back time (insulation benefit compared with the gray energy of the insulating material) is approximately 2.8 years with regard to an insulation thickness of 5 cm on a standard brick stone wall.