KRAFT PAINTS
DRIVEN BY INNOVATION

ENVIRONMENTAL PRODUCT DECLARATION

According to ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021

Repairing mortars

DRUCKFARBEN GROUP

Owner of the Declaration: **DRUCKFARBEN HELLAS S.A.**
Programme: The International EPD® System
www.environdec.com
Programme operator: EPD International AB

Registration number	S-P-08832
Issue date	24.07.2023
Revision date	17.06.2025
Valid to	23.07.2028
Geographical scope	Europe

EPD INTERNATIONAL EPD SYSTEM

ECO PLATFORM EPD VERIFIED

KRAFTPAINTS.COM

Company Description

Druckfarben Group S.A.

- Produces inks for flexography and rotogravure printing.
- In the coatings and mortars division, decorative and architectural products and cementitious putties are commercialized under the KRAFT Paints brand.
- Energy saving / external thermal insulation products are commercialized under the BIOCLIMA brand.

DRUCKFARBEN Group comprises of a group of companies with worldwide activities catering to the ink, coating, and energy saving sectors.

More specifically, **DF Hellas S.A.** produces inks for flexography and rotogravure printing under the **DRUCKFARBEN** brand name using sub-brands for the various applications in the food packaging, plastic bags, cartons, and related products.

In the coatings division it commercializes its decorative and architectural paints products under the **KRAFT PAINTS** brand and in the energy saving/external thermal insulation products under the **BIOCLIMA®** brand. The Group has an important and increasing international presence in Eastern and Central Europe through subsidiaries in Bulgaria, Romania, Serbia, and through representatives in Malta, Turkey, Tunisia, Lebanon, Hungary, Slovenia, Croatia, Albania and Western and North Africa, Israel, and the Gulf countries. In West Africa, the company operates in Nigeria through its own subsidiary and the neighboring countries of the Economic Community of West African States (ECOWAS). The company's strategy includes expanding its export activities to new countries supported by a strong network of local partners.

DRUCKFARBEN holds a significant position in the area of architectural paints, varnishes and mortars related to construction activities under the **KRAFT PAINTS** brand. Also, under the **BIOCLIMA®** brand, the company offers a wide range of certified thermal insulation systems for energy upgrading and aesthetic renovation of new and existing buildings.

EPD
INTERNATIONAL EPD SYSTEM

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, version 1.11

PCR review was conducted by: The Technical Committee of the International EPD® System. See www.environdec.com/TC for a list of members. Review chair: Claudia A. Peña, University of Concepción, Chile. The review panel may be contacted via the Secretariat info@environdec.com

Life cycle assessment (LCA)

LCA accountability: Dr. Frank Werner

Third-party verification

Independent third-party verification of the declaration and data, according to ISO 14025:2006, via:

[X] EPD verification by accredited certification body

Third-party verifier:

Business Quality Verification P.C

BUSINESS QUALITY VERIFICATION BQV

Approved certification body accountable for the third-party verification.

The certification body is accredited by:
Hellenic Accreditation System with accreditation number 1218.

Procedure for follow-up of data during EPD validity involves third-party verifier.

[X] Yes [ ] No

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Comparability:

Basically, a comparison or an evaluation of EPD data is only possible if all the data sets to be compared were created according to EN 15804+A2 and the building context, respectively the product-specific characteristics of performance, are taken into account.

Additional information:

“EPDs within the same product category but registered in different EPD programmes, 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 characterisation factors); have equivalent content declarations; and be valid at the time of comparison.

For further information about comparability, see EN 15804 and ISO 14025.

The EPD owner has the sole ownership, liability, and responsibility for the EPD.
Additional information can be obtained under: https://**kraftpaints.com**

Gontact person

Loukas Angelis / R&D Manager
laggelis@druckfarbengroup.com

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Specification of the products

The declared multiple products are mortars that can be used for concrete repairs (structural and / or non structural) and render repairs on walls & ceilings by DRUCKFARBEN HELLAS S.A. that are marketed under the brand KRAFT Paints.
They are suitable for indoor and outdoor usage.

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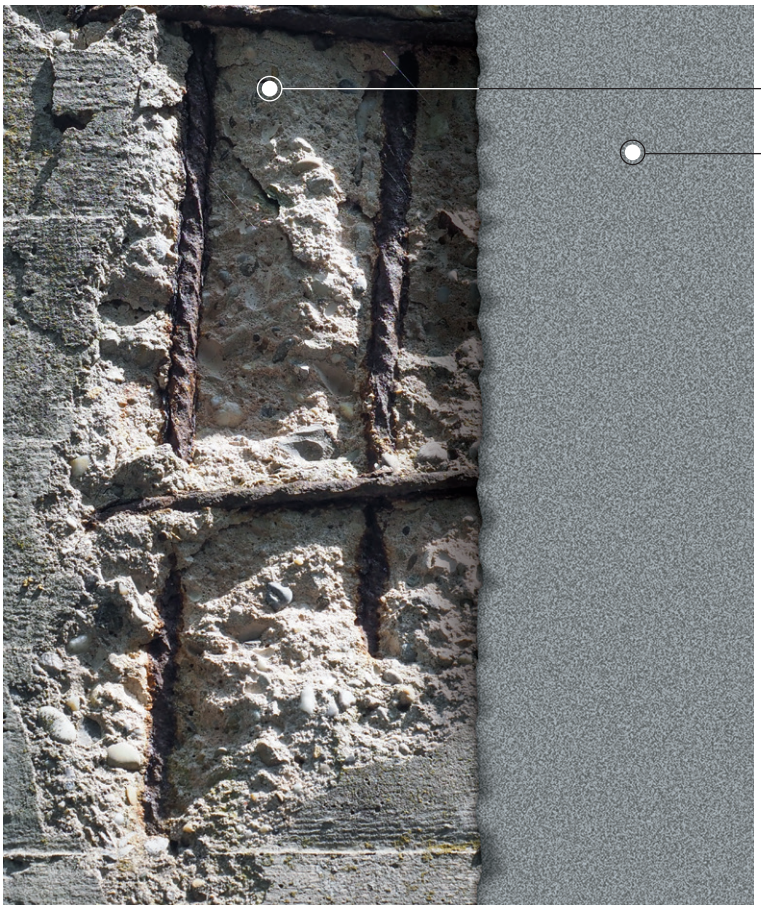
Concrete substrate

1. Rendering / repairing mortar,
   c. Easy Repair 80



Concrete repairing area

1. Repairing mortars,
   d. Fine Repair 83
   e. Strong Repair 84

UN CPC code: **375**

Geographical scope: **Europe**

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1a. LevelWall One:

LevelWall One is a polymer-modified, fiber-reinforced, one-layer rendering mortar. Its formula consists of white cement, specially graded aggregates and advanced polymeric resins.

It is classified as a **OC CS-III W_c1** mortar according to **EN 998-1**.

TECHNICAL DATA
(Measurement conditions 20°C and 50% Relative humidity)

Color	White
Mixing Ratio	5Lt water in 25kg
Grain size (max)	1,3 mm
Bulk Density of dry mortar	1,40±0,05kg/Lt
Bulk Density of fresh mortar	2,00±0,05kg/Lt
Application temperature	From +5°C to +35°C
Application thickness	Up to 30mm per coat
Pot life	2 hours
Consumption	1,6 kg/m²/mm

PRODUCT PERFORMANCES

Compressive strength, EN 1015-11	≥ 5 MPa
Adhesion to concrete, EN 1015-12	≥ 0,60 N/mm² (Fracture Pattern: B)
Adhesion after weathering cycles	≥ 0,40 N/mm² (Fracture Pattern: B)
Water vapor permeability of hardened mortar (μ) EN 1015-19	15/35
Capillary water absorption (c), EN 1015-18	c ≤ 0,40 kg/m²h ^{0,5} (W1)
Water permeability on relevant substrates after weathering cycles (ml/cm² after 48h)	≤ 1 ml/cm²
Thermal conductivity ($\lambda_{10,}$ dry), EN 1745	0,78W/mK
Reaction to fire, EN 13501-1	Euroclass A1

RECYCLED GREEN TECHNOLOGY

CE
EN 998-1
OC CS-III W_c1

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1b. Fast Repair 70:

Fast Repair 70 is a white, fast-setting, fiber reinforced, cement-based, render repairing mortar. It contains in its composition special, natural, active additives that inhibit the formation of shrinkage & dehydration cracks and at the same time offer thixotropy, high adhesion and excellent workability. The selected ratio of cement and graded aggregate granulometry offers a finish texture similar to that of traditional finishing renders, while ensuring double mechanical strength.

It is classified as general purpose render repairing mortar **GP CS-IV W_c0** according to **EN 998-1.**

TECHNICAL DATA
(Measurement conditions 20°C and 65% Relative humidity)

Color	White
Mixing Ratio	5-5,50Lt water in 25kg
Grain size (max)	1000 μm
Bulk Density of dry mortar	1,55±0,05kg/Lt
Bulk Density of fresh mortar	2,10±0,05kg/Lt
Application temperature	From +5°C to +35°C
Application thickness	3-30mm per coat
Pot life	1 hour
Consumption	1,4-1,5 kg/m^2/mm

PRODUCT PERFORMANCES

Compressive strength, EN 1015-11	≥ 10 MPa
Adhesion to concrete, EN 1015-12	≥ 0,60 N/mm^2 (Fracture Pattern: B)
Water vapor permeability of hardened mortar (μ) EN 1015-19	15/35
Capillary water absorption (c) , EN 1015-18	c ≤ 1,2 kg/m^{2}h^{0,5} (W0)
Thermal conductivity (λ10, dry), EN 1745	< 0,95W/mK
Reaction to fire, EN 13501-1	Euroclass A1

CE
EN 998-1
GP CS-IV W.0

1c. Easy Repair 80:

Easy Repair 80 is a one-component, cement-based, repairing mortar, reinforced with advanced adhesion and thixotropic resins, as well as PP fibers. Contains natural hydraulic recycled binders (Recycled Green Technology) as well as active additives that improve workability and eliminate shrinkage & dehydration tendencies. It does not corrode metal reinforcements as it has zero percentage of chlorine ions and lime. The selected ratio of cement and graded aggregates offers a fine-grained finish.

It is classified as concrete repairing mortar **PCC R2** according to **EN 1504-3**.

TECHNICAL DATA
(Measurement conditions 20°C and 65% Relative humidity)

Color	Grey
Mixing Ratio	5,50-6Lt water in 25kg
Grain size (max)	600 μm
Bulk Density of dry mortar	1,45±0,05kg/Lt
Bulk Density of fresh mortar	2,00±0,05kg/Lt
Application temperature	From +5°C to +35°C
Application thickness	3-30mm per coat
Pot life	3 hours
Consumption	1,5-1,6 kg/m^2/mm

PRODUCT PERFORMANCES

Compressive strength, EN 12190	≥ 20 MPa
Chloride ion content, EN 1015-17	≤ 0,05%
Adhesive bond, EN 1542	≥ 1,00 MPa
Thermal compatibility, Part-1, EN 13687-1	≥ 1,00 MPa
apillary absorption, EN 13057	c ≤ 0,50kg ·m^{-2}·min $^{-0,5}$
Reaction to fire, EN 13501-1	A1

RECYCLED GREEN TECHNOLOGY

PCC R2 EN 1504-3

1d. Fine Repair 83:

Fine Repair 83 is a polymer-modified, fine-grained, thixotropic, one-component repairing mortar, reinforced with advanced adhesion and thixotropy resins as well as PP fibers. Contains natural hydraulic recycling binders (Recycled Green Technology) and inorganic phyllosilicate additives that improve workability, regulate hydration-shrinkage mechanisms and improve mechanical strength. Does not corrode metal reinforcements, zero percentage of chloride ions and lime.

It is classified as concrete repairing mortar **PCC R3** according to **EN 1504-3 & EN 1509-9:2008 (Principle 3 Concrete Restoration** - Methods 3.1 & 3.2, **Principle 4 Structural strengthening** - Method 4.4, **Principle 7 Preserving or Restoring Passivity** - Methods 7.1 & 7.2).

TECHNICAL DATA
(Measurement conditions 20°C and 65% Relative humidity)

Color	Grey
Mixing Ratio	4,75-55Lt water in 25kg
Grain size (max)	1200 μm
Bulk Density of dry mortar	1,50±0,05kg/Lt
Bulk Density of fresh mortar	2,05±0,05kg/Lt
Application temperature	From +5°C to +35°C
Application thickness	5-35mm per coat
Pot life	1 hour
Consumption	1,6 kg/m²/mm

PRODUCT PERFORMANCES

Compressive strength , EN 12190	≥ 34 MPa
Chloride ion content, EN 1015-17	≤ 0,01%
Adhesive bond, EN 1542	≥ 2,50 MPa
Carbonation resistance, EN 13295	Passes
Elastic modulus, EN 13412	≥ 20,0 GPa
Thermal compatibility, EN 13687-1	≥ 2,50 MPa
Capillary absorption (c), EN 1015-18	$c \leq 0{,}38 kg \cdot m^{-2} \cdot min^{-0,5}$
Reaction to fire, EN 13501-1	Pending

RECYCLED GREEN TECHNOLOGY

PCC R3 EN 1504-3

1e. Strong Repair 84:

Strong Repair 84 is a polymer-modified, thixotropic, one-component repairing mortar, reinforced with advanced adhesion and thixotropy resins as well as PP fibers. Contains natural hydraulic recycled binders **(Recycled Green Technology)** that improve workability and control hydration mechanisms, as well as active, amorphous, inorganic additives that compensate shrinkage tendencies and maximize mechanical strengths. Does not corrode metal reinforcements, zero percentage of chloride ions and lime.

It is classified as concrete repairing mortar **PCC R4** according to **EN 1504-3 & EN 1509-9:2008 (Principle 3 Concrete Restoration** - Methods 3.1 & 3.2, **Principle 4 Structural strengthening** - Method 4.4, **Principle 7 Preserving or Restoring Passivity** - Methods 7.1 & 7.2).

TECHNICAL DATA
(Measurement conditions 20°C and 50% Relative humidity)

Color	Grey
Mixing Ratio	4,75-55Lt water in 25kg
Grain size (max)	1200 μm
Bulk Density of dry mortar	1,50±0,05kg/Lt
Bulk Density of fresh mortar	2,05±0,05kg/Lt
Application temperature	From +5°C to +35°C
Application thickness	5-35mm per coat
Pot life	1 hour
Consumption	1,6 kg/m²/mm

PRODUCT PERFORMANCES

Compressive strength , EN 12190	≥ 50 MPa
Chloride ion content, EN 1015-17	≤ 0,01%
Adhesive bond, EN 1542	≥ 2,50 MPa
Carbonation resistance, EN 13295	Passes
Elastic modulus, EN 13412	≥ 25,0 GPa
Thermal compatibility, EN 13687-1	≥ 2,50 MPa
Capillary absorption (c), EN 1015-18	$c \leq 0{,}15 kg \cdot m^{-2} \cdot min^{-0,5}$
Reaction to fire, EN 13501-1	Pending

RECYCLED GREEN TECHNOLOGY

PCC R4 EN 1504-3

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Application of the product

These mortars are suitable either for concrete repairs (structural and / or non structural) or for rendering repairs. They can be used also indoor and outdoor.

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1a. LevelWall One

SURFACE PREPARATION:

To ensure good adhesion substrate should be sound, clean, rough, free of dust, oil, lime, tar and loose elements. Light soaking with water before use.

On substrates with high absorbency (eg aerated concrete, old plasters/renders, etc.) it is recommended to apply Eco Dur Aqua by KRAFT PAINTS diluted 1:1 to 1:2 with water. Caution!

The primer must properly be diluted in order to be completely absorbed and avoid film formation on the substrate surface.

MIXING INSTRUCTIONS:

In a clean container add 5 – 5,5 liters of pure water and gradually empty the content of a 25Kg bag of LevelWall One, while stirring constantly with a low-speed electric mixer.

Mixing must be done carefully so that no amount of product remains on the walls or bottom of the container. The product is ready for use when the mixture becomes homogeneous without lumps.

APPLICATION INSTRUCTIONS:

For thicknesses up to 3cm, apply the plaster in one coat using a gauging trowel and a hawk or use a plaster machine. For thicknesses greater than 3cm, complete the plastering process in two successive layers.

First apply the plaster to about half the thickness aiming for, and apply the fiberglass mesh. Once the first layer sets, continue plastering until the desired thickness is achieved. Once the second layer sets as well, begin to smooth the surface using a plastering float.

Do not apply at temperatures below 5°C or above 35°C and at a relative humidity 65% or higher.

Composition of the product

The declared product consists of the following components:

		kg/kg	%
PRODUCT	Binders	0,1404	14%
	Fillers	0,849	85%
	Additives	0,0054	1%
	Rheology modifier	0,0007	0%
PACKAGING	Paper	0,0035	0%
	Cardboard	0,0004	0%
	PE film-LDPE	0,0002	0%

1a. Fast Repair 70

SURFACE PREPARATION:

To ensure good adhesion substrate should be sound, clean, rough, free of dust, oil, lime, tar and loose elements.Light soaking with water before use.

On substrates with high absorbency (eg aerated concrete, old plasters/renders, etc.) it is recommended to apply Eco Dur Aqua by KRAFT PAINTS diluted 1: 1 to 1: 2 with water. Caution! The primer must properly be diluted in order to be completely absorbed and avoid film formation on the substrate surface.

MIXING INSTRUCTIONS:

In a clean container add 5 – 5,5 liters of pure water and gradually empty the content of a 25Kg bag of Fast Repair 70, while stirring constantly with a low-speed electric mixer.

Mixing must be done carefully so that no amount of product remains on the walls or bottom of the container. The product is ready for use when the mixture becomes homogeneous without lumps.

APPLICATION INSTRUCTIONS:

Application of Fast Repair 70 to the substrate is carried out using a metal spatula or trowel in a thickness of 3-30 mm per layer (locally up to 50mm). When the mortar starts to dry enough (~30min), the surface is smoothed by rubbing with polystyrene, sponge float, plastering float or trowel, depending on the desired finishing texture. Subsequent layers are applied when the previous ones have sufficiently dried and after light soaking with water.

For further improvement of adhesion and flexibility, where needed, it is recommended to add KRAFT PAINTS mortar reinforcement resin, in a ratio of 1:2 - 1:3 to the mixing water, depending on each application.

Do not apply at temperatures below 5°C or above 35°C and at a relative humidity 65% or higher.

Composition of the product

The declared product consists of the following components:

		kg/kg	%
PRODUCT	Binders	0,1901	19%
	Fillers	0,7990	80%
	Additives	0,0054	1%
	Rheology modifier	0,0007	0%
PACKAGING	Paper	0,0036	0%
	Cardboard	0,0004	0%
	PE film-LDPE	0,00016	0%

1a. Easy Repair 80

SURFACE PREPARATION:

To ensure good adhesion substrate should be sound, clean, rough, free of dust, oil, lime, tar and loose elements. Light soaking with water before use.

On substrates with high absorbency (eg aerated concrete, old plasters/renders, etc.) it is recommended to apply Eco Dur Aqua by KRAFT PAINTS diluted 1:1 to 1:2 with water. Caution! The primer must properly be diluted in order to be completely absorbed and avoid film formation on the substrate surface.

MIXING INSTRUCTIONS:

In a clean container add 5,5 - 6 liters of pure water and gradually empty the content of a 25Kg bag of Easy Repair 80, while stirring constantly with a low-speed electric mixer.

Mixing must be done carefully so that no amount of product remains on the walls or bottom of the container. The product is ready for use when the mixture becomes homogeneous without lumps.

APPLICATION INSTRUCTIONS:

Application of Easy Repair 80 on the substrate is carried out using a metal spatula or trowel in a thickness of 3-30 mm per layer (locally up to 50mm). Depending on the conditions and the thickness of application, any subsequent layers are repeated with "fresh to fresh" method, or after roughness increase and light wetting of the surface.

Do not apply at temperatures below 5°C or above 35°C and at a relative humidity 65% or higher.

Composition of the product

The declared product consists of the following components:

		kg/kg	%
PRODUCT	Binders	0,295	25%
	Fillers	0,694	74%
	Additives	0,0016	0%
	Rheology modifier	0,0052	1%
PACKAGING	Paper	0,0035	0%
	Cardboard	0,004	0%
	PE film-LDPE	0,00016	0%

1a. Fine Repair 83

SURFACE PREPARATION:

To ensure good adhesion substrate should be sound, clean, rough, free of dust, oil, lime, tar and loose elements. Light soaking with water before use. Any excess water is allowed to evaporate or removed with compressed air.

On substrates with high absorbency (eg aerated concrete, old plasters/renders, etc.) it is recommended to apply Eco Dur Aqua by KRAFT PAINTS diluted 1:1 to 1:2 with water. Caution! The primer must properly be diluted in order to be completely absorbed and avoid film formation on the substrate surface.

MIXING INSTRUCTIONS:

In a clean container add 4,75 - 5 liters of pure water and gradually empty the content of a 25Kg bag of Fine Repair 83, while stirring constantly with a low-speed electric mixer.

Mixing must be done carefully so that no amount of product remains on the walls or bottom of the container. The product is ready for use when the mixture becomes homogeneous without lumps.

APPLICATION INSTRUCTIONS:

Application of Fine Repair 83 on the substrate is carried out using a metal spatula or trowel at a thickness of 5-35 mm per layer (locally up to 50 mm), firmly pressing the mortar into the substrate, to fill any pores or pits.

Depending on the conditions and thickness of application, any subsequent layers are repeated when the previous one has started to set. Otherwise, if it is repeated later, it is recommended to precede with light wetting and roughness increase of the surface.

When usage of forming molds is necessary for the repair, light soaking with water on them is required previously (without excess water formation) and then repairing mortar is carefully poured, without entrapping air and creating pores.

Do not apply at temperatures below 5°C or above 35°C and at a relative humidity 65% or higher.

Composition of the product

The declared product consists of the following components:

		kg/kg	%
PRODUCT	Binders	0,318	32%
	Fillers	0,6656	67%
	Additives	0,0017	0%
	Rheology modifier	0,0099	1%
PACKAGING	Paper	0,0036	0%
	Cardboard	0,0004	0%
	PE film-LDPE	0,00016	0%

1a. Strong Repair 84

SURFACE PREPARATION:

To ensure good adhesion substrate should be sound, clean, rough, free of dust, oil, lime, tar and loose elements. Light soaking with water before use. Any excess water is allowed to evaporate or removed with compressed air.

On substrates with high absorbency (eg aerated concrete, old plasters/renders, etc.) it is recommended to apply Eco Dur Aqua by KRAFT PAINTS diluted 1:1 to 1:2 with water. Caution! The primer must properly be diluted in order to be completely absorbed and avoid film formation on the substrate surface.

MIXING INSTRUCTIONS:

In a clean container add 4,4 - 4,6 liters of pure water and gradually empty the content of a 25Kg bag of Strong Repair 84, while stirring constantly with a low-speed electric mixer.

Mixing must be done carefully so that no amount of product remains on the walls or bottom of the container. The product is ready for use when the mixture becomes homogeneous without lumps.

APPLICATION INSTRUCTIONS:

Application of Strong Repair 84 on the substrate is carried out using a metal spatula or trowel at a thickness of 5-60 mm per layer (locally up to 80 mm), firmly pressing the mortar into the substrate, to fill any pores or pits. Depending on the conditions and thickness of application, any subsequent layers are repeated when the previous one has started to set.

Otherwise, if it is repeated later, it is recommended to precede with light wetting and roughness increase of the surface. When usage of forming molds is necessary for the repair, light soaking with water on them is required previously (without excess water formation) and then repairing mortar is carefully poured, without entrapping air and creating pores.

Do not apply at temperatures below 5°C or above 35°C and at a relative humidity 65% or higher.

Composition of the product

The declared product consists of the following components:

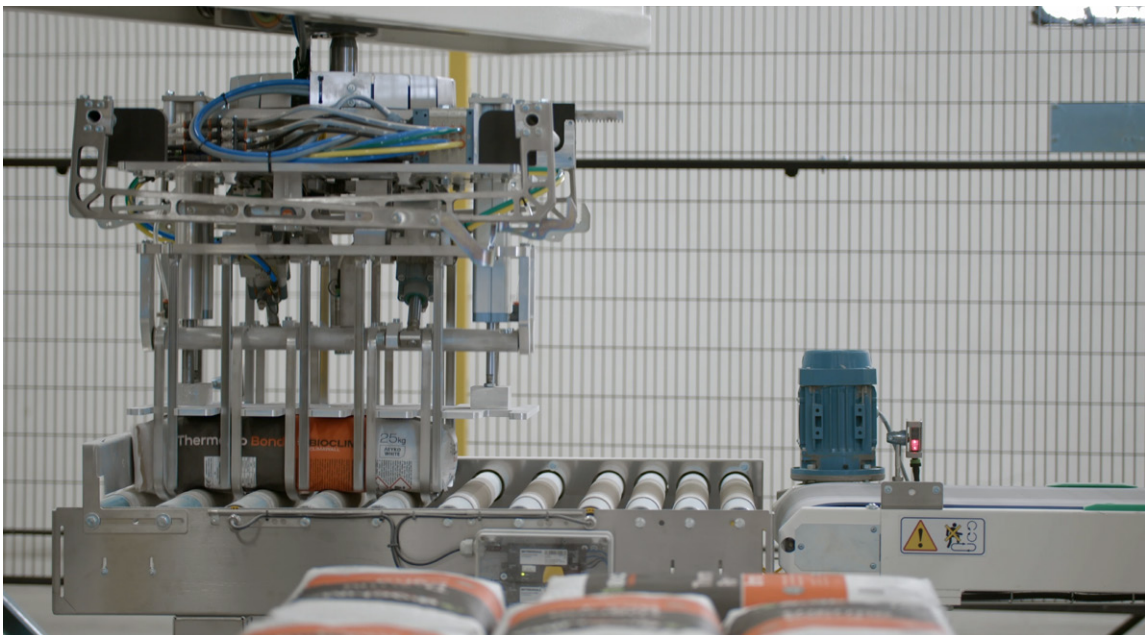
		kg/kg	%
PRODUCT	Binders	0,313	31%
	Fillers	0,68	68%
	Additives	0,0033	1%
	Rheology modifier	0,006	0%
PACKAGING	Paper	0,0036	0%
	Cardboard	0,004	0%
	PE film-LDPE	0,00016	0%

Content of substances of very high concern

The product does not contain any substances on the candidate list for substances of very high concern (SVHC) according to REACH (Annex XIV) (list accessed 26.02.2023).

EPD
INTERNATIONAL EPD SYSTEM

Production Stages



1. Weighing binders and other raw materials
2. Mixing 60-120 sec
3. Packaging

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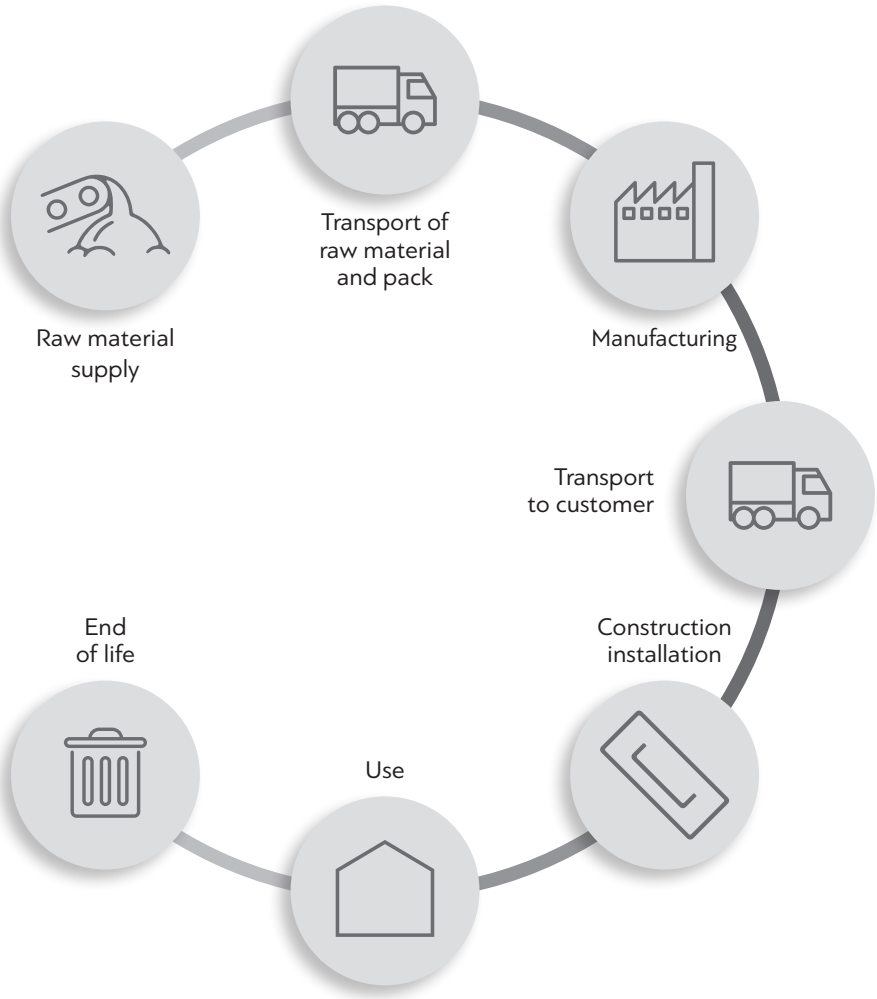
LCA: Calculation rules



Declared unit: The declared unit is 1kg and the declared values represent each product based on:
- the production from June 2022 till June 2023, for the product FAST Repair 70
- the 1st semester of 2023, for the products EASY Repair 80, FINE Repair 83 & STRONG Repair 84
- LevelWall One: Product not yet on the market.

EASY Repair 80, FINE Repair 83 & STRONG Repair 84: Products recently on the market - LCI data is not yet based on 1 year of production.

Type of EPD: Cradle to gate with options, modules C1-C4, and module D (A1-A3, C, D, and additional modules A4 and A5).

Data base: The LCA was calculated in the latest version of the LCA sofrware SimaPro (version 9.4)

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Scenarios and additional technical information

The product does not contain significant quantities of biogenic carbon. The carbon content of multi-use pallets used for transport packaging and paper bats is disregarded.

Information describing the biogenic carbon content at the factory gate		
Name	**Value**	**Unit**
Biogenic Carbon Content in product	0	kg C
Biogenic Carbon Content in accompanying packaging	0	kg C

The following technical information is a basis for the declared modules or can be used for developing specific scenarios in the context of a building assessment.

Transport to the construction site (A4): Module A4 contains the average transport scenario from the production site to the construction site. An average transport distance of 500 km is assumed.

Parameter	**Parameter unit expressed per functional/declared unit**
Fuel type and consumption of vehicle or vehicle type used for transport e.g. long distance truck, boat etc.	Used dataset: Transport, freight, lorry >32 metric ton, EURO5 {RER}| transport, freight, lorry >32 metric ton, EURO5 | Cut-off, U
Distance	500 km
Capacity utilisation (including empty returns)	as in ecoinvent 3.7.1 database
Weight of transported products	**LevelWall One:** 1 kg (packaging: 0.0033kg/kg) **Fast Repair 70:** 1 kg (packaging: 0.0033kg/kg) **Easy Repair 80:** 1 kg (packaging: 0.0033kg/kg) **Fine Repair 83:** 1 kg (packaging: 0.0033kg/kg) **Strong Repair 84:** 1 kg (packaging: 0.0034kg/kg)
Volume capacity utilisation factor (factor: =1 or <1 or ≥ 1 for compressed or nested packaged products)	Not applicable

Installation in the building (A5)

The products are delivered to the construction site. There, water is added to dilute putties to make it ready for use.

Manual application is assumed, eventual further inputs (e.g., electricity consumption for the mixing), are disregarded.

No losses of putties during application are taken into account.

The packaging material (paper bags, cardboard underlayer, PE-foil and wooden pallet) is as sumed to be transported 50 km with a lorry 16-32 metric ton, EURO5 to a landfill.

For the multi-way pallets, a reuse rate of 20 times is taken into account in the disposal scenario.

Parameter	**Parameter unit expressed per functional / declared unit**
Ancillary materials for installation (specified by material);	Water is added (see below)
Water use	**LevelWall One:** 0.180 l/kg **Fast Repair 70:** 0.180 l/kg **Easy Repair 80:** 2,80 l/kg **Fine Repair 83:** 2,55 l/kg **Strong Repair 84:** 2,80 l/kg
Other resource use	0 kg
Quantitative description of energy type (regional mix) and consumption during the installation process	0 kWh (manual installation)
Wastage of materials on the building site before waste processing, generated by the product's installation (specified by type)	kg

Parameter	Parameter unit expressed per functional / declared unit
Output materials (specified by type) as result of waste processing at the building site e.g. of collection for recycling, for energy recovery, disposal (specified by route)	**LevelWall One:** Graphical paper to landifill: 0,0029 kg/kg Cardboard to landfill: 0.000316 kg/kg PE-foil to landifill: 0.00013 kg/kg Wooden pallet to landfill: 0.0143 kg/kg **Fast Repair 70:** Graphical paper to landifill: 0.0029 kg/kg Cardboard to landfill: 0.0029 kg/kg PE-foil to landifill: 0.00013 kg/kg Wooden pallet to landfill: 0.0143 kg/kg **Easy Repair 80:** Graphical paper to landifill: 0.0030 kg/kg Cardboard to landfill: 0.000321 kg/kg PE-foil to landifill: 0.00013 kg/kg Wooden pallet to landfill: 0.0145 kg/kg **Fine Repair 83:** Graphical paper to landifill: 0.0030 kg/kg Cardboard to landfill: 0.000321 kg/kg PE-foil to landifill: 0.00013 kg/kg Wooden pallet to landfill: 0.0145 kg/kg **Strong Repair 84:** Graphical paper to landifill: 0.0031 kg/kg Cardboard to landfill: 0.00031 kg/kg PE-foil to landifill: 0.00014 kg/kg Wooden pallet to landfill: 0.0149 kg/kg
Direct emissions to ambient air, soil and water	**Not relevant**

End-of-life (C1 - C4)

Putties are not removed from the wall material during de-construction. Thus, no environmental impacts are declared in module C1.

A landfilling scenario is assumed for Greece, similar to a disposal scenario for bricks or concrete. A default distance of 50 km is assumed between the de-construction site and the landfill.

Processes	**Parameter unit expressed per functional / declared unit of components, products or materials (specified by type of material)**
Collection process specified by type	LevelWall One: 0.820 kg/kg collected separately Fast Repair 70: 0.820 kg/kg collected separately Easy Repair 80: 0.830 kg/kg collected separately Fine Repair 83: 0.833 kg/kg collected separately Strong Repair 84: 0.858 kg/kg collected separately
	0 kg/m^2 collected with mixed construction waste
Recovery system specified by type	0 kg for re-use
	0 kg for recycling
	0 kg for energy recovery
Disposal specified by type	LevelWall One: 0.820 kg/kg going to landfill Fast Repair 70: 0.820 kg/kg going to landfill Easy Repair 80: 0.830 kg/kg going to landfill Fine Repair 83: 0.833 kg/kg going to landfill Strong Repair 84: .858 kg/kg going to landfill
Assumptions for scenario development, (e.g. transportation)	see above

EPD
INTERNATIONAL EPD SYSTEM

Reuse, recovery and recycling potential (D)

Not relevant for the declared product

Results for Putties in powder form

DESCRIPTION OF THE SYSTEM BOUNDARY
(X = INCLUDED IN LCA; ND = MODULE OR INDICATOR NOT DECLARED)

	PRODUCT STAGE			CONSTRUCTION PROCESS STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARIES
	Raw material supply	Transport	Manufacturing	Transport from the gate to the site	Assembly	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	X	X	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X
Geography	**GR**			**South-East Europe**									**South-East Europe**				-
Specific data used	**> 90%**			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation products	-			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation sites	-			-	-	-	-	-	-	-	-	-	-	-	-	-	-

KRAFT PAINTS
DRIVEN BY INNOVATION

RESULTS OF THE LCA - ENVIRONMENTAL IMPACTS according to EN 15804+A2: 1kg of LevelWall One

Core Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
GWP total	kg CO_2 eq	2.08E-01	4.56E-02	1.59E-03	0	8.30E-03	0	7.68E-03	0
GWP fossil	kg CO_2 eq	2.09E-01	4.55E-02	2.65E-04	0	8.30E-03	0	7.67E-03	0
GWP biogenic	kg CO_2 eq	-1.33E-03	0.00E+00	1.33E-03	0	0.00E+00	0	0.00E+00	0
GWP luluc	kg CO_2 eq	9.43E-05	1.64E-05	3.06E-07	0	3.26E-06	0	2.41E-06	0
ODP	kg CFC11 eq	1.55E-08	1.09E-08	3.57E-11	0	1.92E-09	0	2.90E-09	0
AP	mol H^+ eq	7.26E-04	1.90E-04	1.82E-06	0	3.37E-05	0	6.11E-05	0
EP freshwater	kg P eq	5.68E-06	3.11E-07	1.23E-08	0	5.82E-08	0	5.34E-08	0
EP-marine	kg N eq	1.92E-04	5.74E-05	9.83E-06	0	1.00E-05	0	2.27E-05	0
EP terrestrial	mol N eq	2.21E-03	6.34E-04	4.44E-06	0	1.11E-04	0	2.50E-04	0
POCP	kg NMVOC eq	5.89E-04	2.04E-04	3.41E-06	0	3.40E-05	0	7.14E-05	0
ADPE	kg Sb eq	4.22E-07	1.04E-07	9.42E-10	0	2.89E-08	0	2.03E-08	0
ADPF	MJ	1.59E+00	7.10E-01	4.05E-03	0	1.25E-01	0	1.90E-01	0
WDP	m^3 depriv.	6.11E-02	2.44E-03	9.53E-03	0	3.76E-04	0	6.20E-04	0
Caption	GWP = Global warming potential; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential of land and water; EP = Eutrophication potential; POCP = Formation potential of tropospheric ozone photochemical oxidants; ADPE = Abiotic depletion potential for non- fossil resources; ADPF = Abiotic depletion potential for fossil resources; WDP = Water (user) deprivation potential								

RESULTS OF THE LCA - ENVIRONMENTAL IMPACTS according to EN 15804+A2: 1kg of Fast Repair 70

Core Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
GWP total	kg CO_2 eq	2.61E-01	4.56E-02	1.59E-03	0	8.30E-03	0	7.68E-03	0
GWP fossil	kg CO_2 eq	2.62E-01	4.55E-02	2.65E-04	0	8.30E-03	0	7.67E-03	0
GWP biogenic	kg CO_2 eq	-1.33E-03	0.00E+00	1.33E-03	0	0.00E+00	0	0.00E+00	0
GWP luluc	kg CO_2 eq	1.03E-04	1.64E-05	3.06E-07	0	3.26E-06	0	2.41E-06	0
ODP	kg CFC11 eq	1.61E-08	1.09E-08	3.57E-11	0	1.92E-09	0	2.90E-09	0
AP	mol H^+ eq	8.58E-04	1.90E-04	1.82E-06	0	3.37E-05	0	6.11E-05	0
EP freshwater	kg P eq	6.30E-06	3.11E-07	1.23E-08	0	5.82E-08	0	5.34E-08	0
EP-marine	kg N eq	2.39E-04	5.74E-05	9.83E-06	0	1.00E-05	0	2.27E-05	0
EP terrestrial	mol N eq	2.74E-03	6.34E-04	4.44E-06	0	1.11E-04	0	2.50E-04	0
POCP	kg NMVOC eq	7.15E-04	2.04E-04	3.41E-06	0	3.40E-05	0	7.14E-05	0
ADPE	kg Sb eq	4.82E-07	1.04E-07	9.42E-10	0	2.89E-08	0	2.03E-08	0
ADPF	MJ	1.73E+00	7.10E-01	4.05E-03	0	1.25E-01	0	1.90E-01	0
WDP	m^3 depriv.	6.55E-02	2.44E-03	9.53E-03	0	3.76E-04	0	6.20E-04	0
Caption	GWP = Global warming potential; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential of land and water; EP = Eutrophication potential; POCP = Formation potential of tropospheric ozone photochemical oxidants; ADPE = Abiotic depletion potential for non- fossil resources; ADPF = Abiotic depletion potential for fossil resources; WDP = Water (user) deprivation potential								

RESULTS OF THE LCA - ENVIRONMENTAL IMPACTS according to EN 15804+A2: 1kg of Easy Repair 80 (CEM I)

Core Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
GWP total	kg CO_2 eq	3,43E+00	5,80E-01	2,03E-02	0	1,06E-01	0	9,76E-02	0
GWP fossil	kg CO_2 eq	3,44E+00	5,79E-01	3,37E-03	0	1,06E-01	0	9,76E-02	0
GWP biogenic	kg CO_2 eq	-1,69E-02	0,00E+00	1,69E-02	0	0,00E+00	0	0,00E+00	0
GWP luluc	kg CO_2 eq	1,25E-03	2,08E-04	3,89E-06	0	4,15E-05	0	3,06E-05	0
GWP GHG	kg CO_2 eq	3,44E+00	5,80E-01	3,38E-03		1,06E-01		9,76E-02	
ODP	kg CFC11 eq	1,66E-07	1,38E-07	4,54E-10	0	2,44E-08	0	3,68E-08	0
AP	mol H^+ eq	1,06E-02	2,42E-03	2,32E-05	0	4,28E-04	0	7,78E-04	0
EP freshwater	kg P eq	8,10E-05	3,96E-06	1,56E-07	0	7,40E-07	0	6,80E-07	0
EP-marine	kg N eq	2,43E-03	7,30E-04	1,25E-04	0	1,28E-04	0	2,89E-04	0
EP terrestrial	mol N eq	2,87E-02	8,06E-03	5,64E-05	0	1,41E-03	0	3,18E-03	0
POCP	kg NMVOC eq	7,68E-03	2,59E-03	4,33E-05	0	4,32E-04	0	9,09E-04	0
ADPE	kg Sb eq	7,97E-06	1,33E-06	1,20E-08	0	3,67E-07	0	2,58E-07	0
ADPF	MJ	2,49E+01	9,03E+00	5,15E-02	0	1,60E+00	0	2,42E+00	0
WDP	m^3 depriv.	8,35E-01	3,11E-02	1,21E-01	0	4,78E-03	0	7,88E-03	0
Caption	GWP = Global warming potential; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential of land and water; EP = Eutrophication potential; POCP = Formation potential of tropospheric ozone photochemical oxidants; ADPE = Abiotic depletion potential for non- fossil resources; ADPF = Abiotic depletion potential for fossil resources; WDP = Water (user) deprivation potential								

RESULTS OF THE LCA - ENVIRONMENTAL IMPACTS according to EN 15804+A2: 1kg of Fine Repair 83

Core Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
GWP total	kg CO_2 eq	3.31E-01	4.58E-02	1.59E-03	0	8.34E-03	0	7.71E-03	0
GWP fossil	kg CO_2 eq	3.32E-01	4.58E-02	2.53E-04	0	8.34E-03	0	7.71E-03	0
GWP biogenic	kg CO_2 eq	-1.33E-03	0.00E+00	1.33E-03	0	0.00E+00	0	0.00E+00	0
GWP luluc	kg CO_2 eq	1.10E-04	1.65E-05	2.86E-07	0	3.27E-06	0	2.42E-06	0
ODP	kg CFC11 eq	1.80E-08	1.09E-08	3.47E-11	0	1.93E-09	0	2.91E-09	0
AP	mol H^+ eq	1.00E-03	1.91E-04	1.74E-06	0	3.38E-05	0	6.14E-05	0
EP freshwater	kg P eq	6.94E-06	3.13E-07	1.14E-08	0	5.85E-08	0	5.37E-08	0
EP-marine	kg N eq	2.37E-04	5.77E-05	9.63E-06	0	1.01E-05	0	2.28E-05	0
EP terrestrial	mol N eq	2.76E-03	6.37E-04	4.28E-06	0	1.11E-04	0	2.51E-04	0
POCP	kg NMVOC eq	7.60E-04	2.05E-04	3.31E-06	0	3.41E-05	0	7.18E-05	0
ADPE	kg Sb eq	7.49E-07	1.05E-07	8.87E-10	0	2.90E-08	0	2.04E-08	0
ADPF	MJ	2.53E+00	7.13E-01	3.84E-03	0	1.26E-01	0	1.91E-01	0
WDP	m^3 depriv.	6.98E-02	2.45E-03	8.28E-03	0	3.78E-04	0	6.23E-04	0
Caption	GWP = Global warming potential; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential of land and water; EP = Eutrophication potential; POCP = Formation potential of tropospheric ozone photochemical oxidants; ADPE = Abiotic depletion potential for non- fossil resources; ADPF = Abiotic depletion potential for fossil resources; WDP = Water (user) deprivation potential								

RESULTS OF THE LCA - ENVIRONMENTAL IMPACTS according to EN 15804+A2: 1kg of Strong Repair 84

Core Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
GWP total	kg CO_2 eq	4.11E-01	4.56E-02	1.57E-03	0	8.31E-03	0	7.68E-03	0
GWP fossil	kg CO_2 eq	4.13E-01	4.56E-02	2.45E-04	0	8.31E-03	0	7.68E-03	0
GWP biogenic	kg CO_2 eq	-1.33E-03	0.00E+00	1.33E-03	0	0.00E+00	0	0.00E+00	0
GWP luluc	kg CO_2 eq	1.48E-04	1.64E-05	2.74E-07	0	3.26E-06	0	2.41E-06	0
ODP	kg CFC11 eq	2.52E-08	1.09E-08	3.40E-11	0	1.92E-09	0	2.90E-09	0
AP	mol H^+ eq	1.32E-03	1.90E-04	1.69E-06	0	3.37E-05	0	6.12E-05	0
EP freshwater	kg P eq	8.60E-06	3.12E-07	1.09E-08	0	5.82E-08	0	5.35E-08	0
EP-marine	kg N eq	2.92E-04	5.75E-05	9.47E-06	0	1.01E-05	0	2.27E-05	0
EP terrestrial	mol N eq	3.39E-03	6.34E-04	4.17E-06	0	1.11E-04	0	2.50E-04	0
POCP	kg NMVOC eq	9.28E-04	2.04E-04	3.25E-06	0	3.40E-05	0	7.15E-05	0
ADPE	kg Sb eq	1.14E-06	1.05E-07	8.53E-10	0	2.89E-08	0	2.03E-08	0
ADPF	MJ	3.14E+00	7.10E-01	3.71E-03	0	1.26E-01	0	1.91E-01	0
WDP	m^3 depriv.	-1.44E-01	2.44E-03	7.60E-03	0	3.76E-04	0	6.20E-04	0
Caption	GWP = Global warming potential; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential of land and water; EP = Eutrophication potential; POCP = Formation potential of tropospheric ozone photochemical oxidants; ADPE = Abiotic depletion potential for non- fossil resources; ADPF = Abiotic depletion potential for fossil resources; WDP = Water (user) deprivation potential								

RESULTS OF THE LCA - INDICATORS TO DESCRIBE RESOURCE USE according to EN 15804+A2: 1kg of LevelWall One

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
PERE	MJ (Hu)	2.55E-01	8.90E-03	2.96E-04	0	1.74E-03	0	4.63E-03	0
PERM	MJ (Hu)	1.42E-02	0	0	0	0	0	0	0
PERT	MJ (Hu)	2.69E-01	8.90E-03	2.96E-04	0	1.74E-03	0	4.63E-03	0
PENRE	MJ (Hu)	1.59E+00	7.10E-01	4.06E-03	0	1.26E-01	0	1.90E-01	0
PENRM	MJ (Hu)	6.96E-03	0	0	0	0	0	0	0
PENRT	MJ (Hu)	1.60E+00	7.10E-01	4.06E-03	0	1.26E-01	0	1.90E-01	0
SM	kg	0	0	0	0	0	0	0	0
RSF	MJ (Hu)	0	0	0	0	0	0	0	0
NRSF	MJ (Hu)	0	0	0	0	0	0	0	0
FW	m^3	1.40E-03	7.44E-05	1.91E-06	0	1.32E-05	0	2.21E-05	0

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

RESULTS OF THE LCA - INDICATORS TO DESCRIBE RESOURCE USE according to EN 15804+A2: 1kg of Fast Repair 70

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
PERE	MJ (Hu)	2.66E-01	8.90E-03	2.96E-04	0	1.74E-03	0	4.63E-03	0
PERM	MJ (Hu)	1.42E-02	0	0	0	0	0	0	0
PERT	MJ (Hu)	2.81E-01	8.90E-03	2.96E-04	0	1.74E-03	0	4.63E-03	0
PENRE	MJ (Hu)	1.73E+00	7.10E-01	4.06E-03	0	1.26E-01	0	1.90E-01	0
PENRM	MJ (Hu)	6.96E-03	0	0	0	0	0	0	0
PENRT	MJ (Hu)	1.74E+00	7.10E-01	4.06E-03	0	1.26E-01	0	1.90E-01	0
SM	kg	0	0	0	0	0	0	0	0
RSF	MJ (Hu)	0	0	0	0	0	0	0	0
NRSF	MJ (Hu)	0	0	0	0	0	0	0	0
FW	m^3	1.44E-03	7.44E-05	1.91E-06	0	1.32E-05	0	2.21E-05	0

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

RESULTS OF THE LCA - INDICATORS TO DESCRIBE RESOURCE USE according to EN 15804+A2: 1kg of Easy Repair 80 (CEM I)

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
PERE	MJ (Hu)	3,44E+00	1,13E-01	3,76E-03	0	2,21E-02	0	5,88E-02	0
PERM	MJ (Hu)	1,81E-01	0	0	0	0	0	0	0
PERT	MJ (Hu)	3,62E+00	1,13E-01	3,76E-03	0	2,21E-02	0	5,88E-02	0
PENRE	MJ (Hu)	2,49E+01	9,03E+00	5,16E-02	0	1,60E+00	0	2,42E+00	0
PENRM	MJ (Hu)	8,85E-02	0	0	0	0	0	0	0
PENRT	MJ (Hu)	2,50E+01	9,03E+00	5,16E-02	0	1,60E+00	0	2,42E+00	0
SM	kg	0,00E+00	0	0	0	0	0	0	0
RSF	MJ (Hu)	0	0	0	0	0	0	0	0
NRSF	MJ (Hu)	0	0	0	0	0	0	0	0
FW	m^3	2,17E-02	9,46E-04	2,43E-05	0	1,67E-04	0	2,82E-04	0

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

RESULTS OF THE LCA - INDICATORS TO DESCRIBE RESOURCE USE according to EN 15804+A2: 1kg of Fine Repair 83

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
PERE	MJ (Hu)	2.80E-01	8.94E-03	2.71E-04	0	1.75E-03	0	4.65E-03	0
PERM	MJ (Hu)	1.43E-02	0	0	0	0	0	0	0
PERT	MJ (Hu)	2.94E-01	8.94E-03	2.71E-04	0	1.75E-03	0	4.65E-03	0
PENRE	MJ (Hu)	2.54E+00	7.13E-01	3.85E-03	0	1.26E-01	0	1.91E-01	0
PENRM	MJ (Hu)	6.99E-03	0	0	0	0	0	0	0
PENRT	MJ (Hu)	2.54E+00	7.13E-01	3.85E-03	0	1.26E-01	0	1.91E-01	0
SM	kg	0	0	0	0	0	0	0	0
RSF	MJ (Hu)	0	0	0	0	0	0	0	0
NRSF	MJ (Hu)	0	0	0	0	0	0	0	0
FW	m^3	1.82E-03	7.47E-05	1.73E-06	0	1.32E-05	0	2.22E-05	0

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

RESULTS OF THE LCA - INDICATORS TO DESCRIBE RESOURCE USE according to EN 15804+A2: 1kg of Strong Repair 84

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
PERE	MJ (Hu)	3.11E-01	8.91E-03	2.57E-04	0	1.74E-03	0	4.63E-03	0
PERM	MJ (Hu)	1.42E-02	0	0	0	0	0	0	0
PERT	MJ (Hu)	3.25E-01	8.91E-03	2.57E-04	0	1.74E-03	0	4.63E-03	0
PENRE	MJ (Hu)	3.15E+00	7.11E-01	3.72E-03	0	1.26E-01	0	1.91E-01	0
PENRM	MJ (Hu)	6.97E-03	0	0	0	0	0	0	0
PENRT	MJ (Hu)	3.15E+00	7.11E-01	3.72E-03	0	1.26E-01	0	1.91E-01	0
SM	kg	0	0	0	0	0	0	0	0
RSF	MJ (Hu)	0	0	0	0	0	0	0	0
NRSF	MJ (Hu)	0	0	0	0	0	0	0	0
FW	m^3	2.20E-03	7.44E-05	1.63E-06	0	1.32E-05	0	2.22E-05	0

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

RESULTS OF THE LCA - WASTE CATEGORIES AND OUTPUT FLOWS according to EN 15804+A2: LevelWall One

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
HWD	kg	2.32E-06	1.72E-06	6.79E-09	0	3.28E-07	0	2.87E-07	0
NHWD	kg	5.62E-02	6.66E-02	6.18E-03	0	6.49E-03	0	1.00E+00	0
RWD	kg	1.74E-05	1.03E-05	4.55E-08	0	1.82E-06	0	2.76E-06	0
CRU	kg	0	0	0	0	0	0	0	0
MFR	kg	0	0	0	0	0	0	0	0
MER	kg	0	0	0	0	0	0	0	0
EEE	MJ	0	0	0	0	0	0	0	0
EET	MJ	0	0	0	0	0	0	0	0

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; EEE = Exported thermal energy

RESULTS OF THE LCA - WASTE CATEGORIES AND OUTPUT FLOWS according to EN 15804+A2: Fast Repair 70

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
HWD	kg	2.41E-06	1.72E-06	6.79E-09	0	3.28E-07	0	2.87E-07	0
NHWD	kg	5.78E-02	6.66E-02	6.18E-03	0	6.49E-03	0	1.00E+00	0
RWD	kg	1.87E-05	1.03E-05	4.55E-08	0	1.82E-06	0	2.76E-06	0
CRU	kg	0	0	0	0	0	0	0	0
MFR	kg	0	0	0	0	0	0	0	0
MER	kg	0	0	0	0	0	0	0	0
EEE	MJ	0	0	0	0	0	0	0	0
EET	MJ	0	0	0	0	0	0	0	0

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; EEE = Exported thermal energy

RESULTS OF THE LCA - WASTE CATEGORIES AND OUTPUT FLOWS according to EN 15804+A2: Easy Repair 80 (CEM I)

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
HWD	kg	2,22E-05	2,19E-05	8,63E-08	0	4,17E-06	0	3,65E-06	0
NHWD	kg	2,76E-01	8,48E-01	7,86E-02	0	8,26E-02	0	1,27E+01	0
RWD	kg	2,07E-04	1,31E-04	5,79E-07	0	2,31E-05	0	3,51E-05	0
CRU	kg	0	0	0	0	0	0	0	0
MFR	kg	0	0	0	0	0	0	0	0
MER	kg	0	0	0	0	0	0	0	0
EEE	MJ	0	0	0	0	0	0	0	0
EET	MJ	0	0	0	0	0	0	0	0

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; EEE = Exported thermal energy

RESULTS OF THE LCA - WASTE CATEGORIES AND OUTPUT FLOWS according to EN 15804+A2: Fine Repair 83

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
HWD	kg	2.41E-06	1.73E-06	6.44E-09	0	3.29E-07	0	2.88E-07	0
NHWD	kg	4.31E-02	6.69E-02	6.05E-03	0	6.52E-03	0	1.01E+00	0
RWD	kg	2.15E-05	1.03E-05	4.33E-08	0	1.83E-06	0	2.77E-06	0
CRU	kg	0	0	0	0	0	0	0	0
MFR	kg	0	0	0	0	0	0	0	0
MER	kg	0	0	0	0	0	0	0	0
EEE	MJ	0	0	0	0	0	0	0	0
EET	MJ	0	0	0	0	0	0	0	0

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; EEE = Exported thermal energy

RESULTS OF THE LCA - WASTE CATEGORIES AND OUTPUT FLOWS according to EN 15804+A2: Strong Repair 84

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
HWD	kg	2.88E-06	1.72E-06	6.23E-09	0	3.28E-07	0	2.87E-07	0
NHWD	kg	5.25E-02	6.67E-02	5.95E-03	0	6.50E-03	0	1.00E+00	0
RWD	kg	2.45E-05	1.03E-05	4.19E-08	0	1.82E-06	0	2.76E-06	0
CRU	kg	0	0	0	0	0	0	0	0
MFR	kg	0	0	0	0	0	0	0	0
MER	kg	0	0	0	0	0	0	0	0
EEE	MJ	0	0	0	0	0	0	0	0
EET	MJ	0	0	0	0	0	0	0	0

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; EEE = Exported thermal energy

RESULTS OF THE LCA - additional impact categories according to EN 15804+A2-optional: 1kg of LevelWall One

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
PM	Desease incidences	7.28E-09	5.35E-09	2.09E-11	0	7.14E-10	0	1.30E-09	0
IR	kBq U-235 eq	7.50E-03	3.08E-03	2.04E-05	0	5.45E-04	0	8.26E-04	0
ETP-fw	CTUe	3.65E+00	5.54E-01	3.95E-02	0	9.79E-02	0	1.19E-01	0
HTP-c	CTUh	5.82E-11	1.53E-11	4.24E-13	0	3.17E-12	0	3.54E-12	0
HTP-nc	CTUh	2.04E-09	6.07E-10	1.87E-11	0	1.03E-10	0	8.47E-11	0
SQP	-	1.71E+00	8.12E-01	4.44E-03	0	8.62E-02	0	3.51E-01	0

Caption	PM = Potential incidence of disease due to PM emissions; IR = Potential Human exposure efficiency relative to U235; ETP-fw = Potential comparative Toxic Unit for ecosystems; HTP-c = Potential comparative Toxic Unit for humans (cancerogenic); HTP-nc = Potential comparative Toxic Unit for humans (not cancerogenic); SQP = Potential soil quality index

RESULTS OF THE LCA - additional impact categories according to EN 15804+A2-optional: 1kg of Fast Repair 70

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
PM	Desease incidences	7.82E-09	5.35E-09	2.09E-11	0	7.14E-10	0	1.30E-09	0
IR	kBq U-235 eq	8.19E-03	3.08E-03	2.04E-05	0	5.45E-04	0	8.26E-04	0
ETP-fw	CTUe	3.81E+00	5.54E-01	3.95E-02	0	9.79E-02	0	1.19E-01	0
HTP-c	CTUh	6.46E-11	1.53E-11	4.24E-13	0	3.17E-12	0	3.54E-12	0
HTP-nc	CTUh	2.36E-09	6.07E-10	1.87E-11	0	1.03E-10	0	8.47E-11	0
SQP	-	1.75E+00	8.12E-01	4.44E-03	0	8.62E-02	0	3.51E-01	0

Caption	PM = Potential incidence of disease due to PM emissions; IR = Potential Human exposure efficiency relative to U235; ETP-fw = Potential comparative Toxic Unit for ecosystems; HTP-c = Potential comparative Toxic Unit for humans (cancerogenic); HTP-nc = Potential comparative Toxic Unit for humans (not cancerogenic); SQP = Potential soil quality index

RESULTS OF THE LCA - additional impact categories according to EN 15804+A2-optional: 1kg of Easy Repair 80 (CEM I)

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
PM	Desease incidences	7,62E-08	6,80E-08	2,66E-10	0	9,08E-09	0	1,65E-08	0
IR	kBq U-235 eq	9,46E-02	3,92E-02	2,60E-04	0	6,93E-03	0	1,05E-02	0
ETP-fw	CTUe	4,79E+01	7,05E+00	5,03E-01	0	1,25E+00	0	1,51E+00	0
HTP-c	CTUh	9,13E-10	1,95E-10	5,39E-12	0	4,03E-11	0	4,50E-11	0
HTP-nc	CTUh	2,90E-08	7,72E-09	2,37E-10	0	1,31E-09	0	1,08E-09	0
SQP	-	1,83E+01	1,03E+01	5,65E-02	0	1,10E+00	0	4,46E+00	0

Caption	PM = Potential incidence of disease due to PM emissions; IR = Potential Human exposure efficiency relative to U235; ETP-fw = Potential comparative Toxic Unit for ecosystems; HTP-c = Potential comparative Toxic Unit for humans (cancerogenic); HTP-nc = Potential comparative Toxic Unit for humans (not cancerogenic); SQP = Potential soil quality index

RESULTS OF THE LCA - additional impact categories according to EN 15804+A2-optional: 1kg of Fine Repair 83

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
PM	Desease incidences	8.14E-09	5.37E-09	2.01E-11	0	7.17E-10	0	1.31E-09	0
IR	kBq U-235 eq	9.23E-03	3.09E-03	1.91E-05	0	5.47E-04	0	8.30E-04	0
ETP-fw	CTUe	4.03E+00	5.57E-01	3.86E-02	0	9.84E-02	0	1.19E-01	0
HTP-c	CTUh	6.91E-11	1.54E-11	3.81E-13	0	3.19E-12	0	3.55E-12	0
HTP-nc	CTUh	2.79E-09	6.10E-10	1.78E-11	0	1.03E-10	0	8.51E-11	0
SQP	-	1.72E+00	8.16E-01	4.33E-03	0	8.66E-02	0	3.52E-01	0

Caption	PM = Potential incidence of disease due to PM emissions; IR = Potential Human exposure efficiency relative to U235; ETP-fw = Potential comparative Toxic Unit for ecosystems; HTP-c = Potential comparative Toxic Unit for humans (cancerogenic); HTP-nc = Potential comparative Toxic Unit for humans (not cancerogenic); SQP = Potential soil quality index

RESULTS OF THE LCA - additional impact categories according to EN 15804+A2-optional: 1kg of Strong Repair 84

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
PM	Desease incidences	1.07E-08	5.35E-09	1.96E-11	0	7.15E-10	0	1.30E-09	0
IR	kBq U-235 eq	1.07E-02	3.08E-03	1.83E-05	0	5.45E-04	0	8.26E-04	0
ETP-fw	CTUe	5.38E+00	5.55E-01	3.79E-02	0	9.80E-02	0	1.19E-01	0
HTP-c	CTUh	1.42E-10	1.54E-11	3.58E-13	0	3.17E-12	0	3.54E-12	0
HTP-nc	CTUh	4.28E-09	6.07E-10	1.73E-11	0	1.03E-10	0	8.48E-11	0
SQP	-	1.73E+00	8.13E-01	4.25E-03	0	8.63E-02	0	3.51E-01	0

Caption	PM = Potential incidence of disease due to PM emissions; IR = Potential Human exposure efficiency relative to U235; ETP-fw = Potential comparative Toxic Unit for ecosystems; HTP-c = Potential comparative Toxic Unit for humans (cancerogenic); HTP-nc = Potential comparative Toxic Unit for humans (not cancerogenic); SQP = Potential soil quality index

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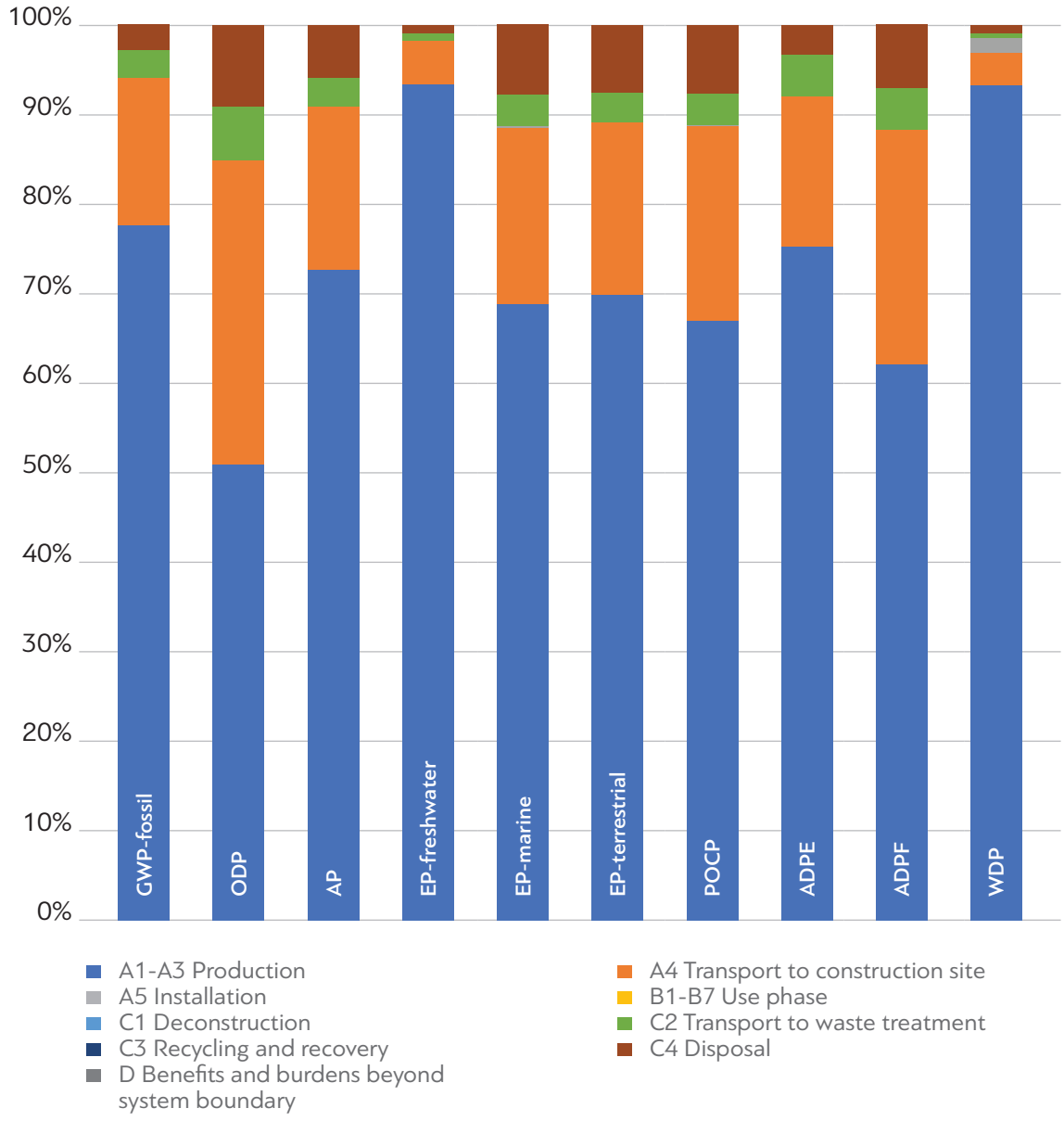
Relative contributions to the life cycle impacts of: LevelWall One



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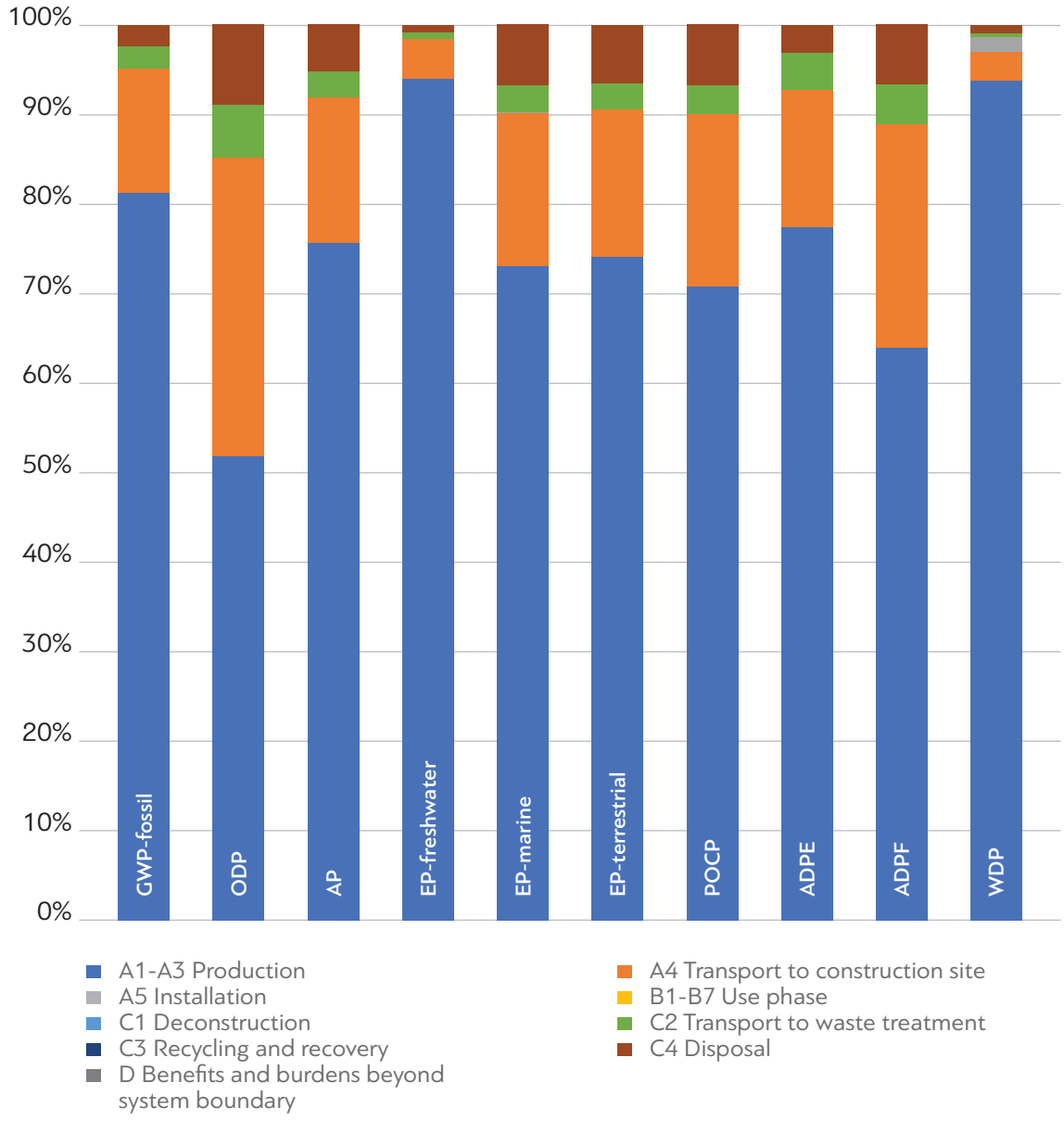
Relative contributions to the life cycle impacts of: Fast Repair 70



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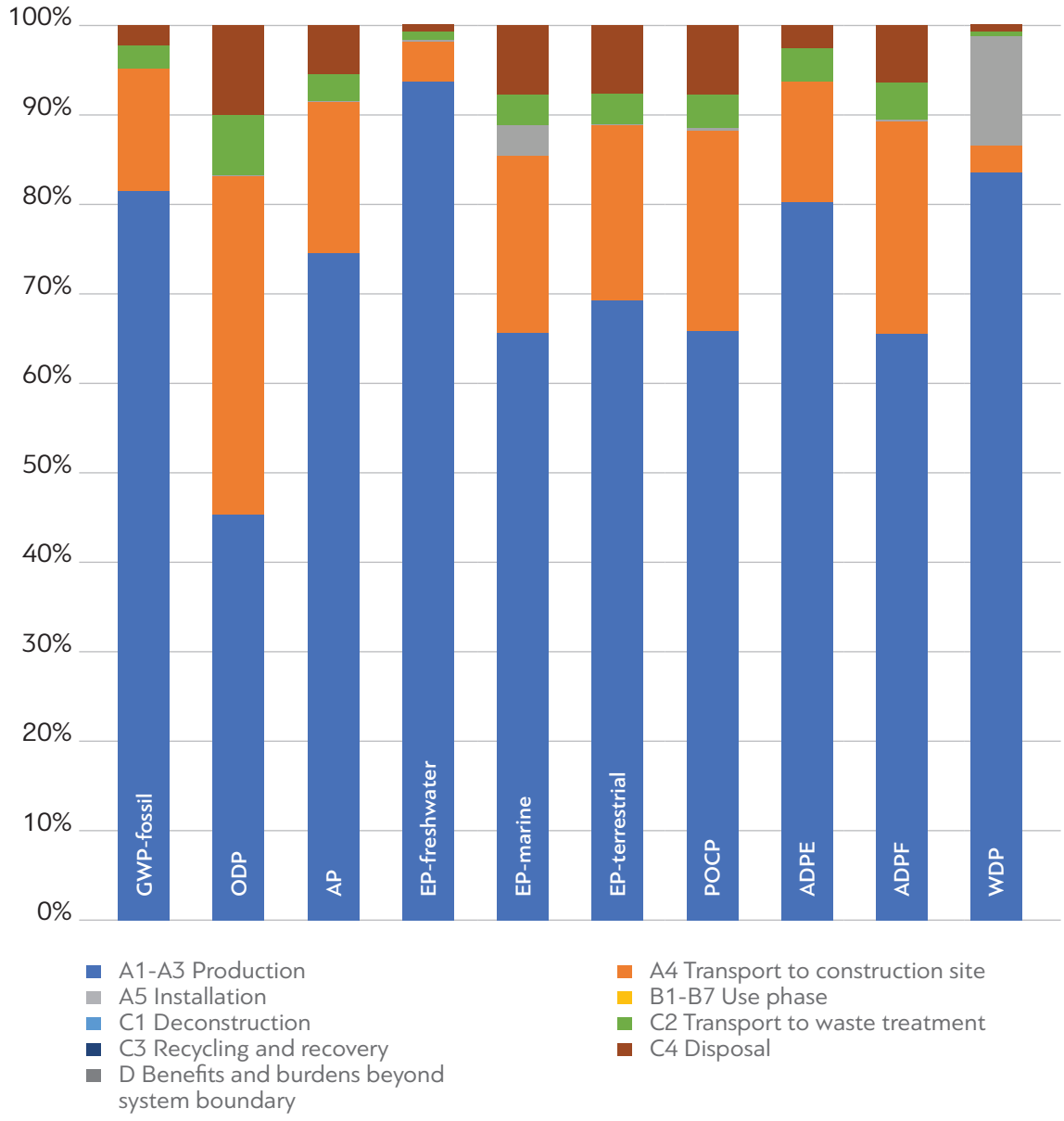
Relative contributions to the life cycle impacts of: Easy Repair 80 (CEM I)



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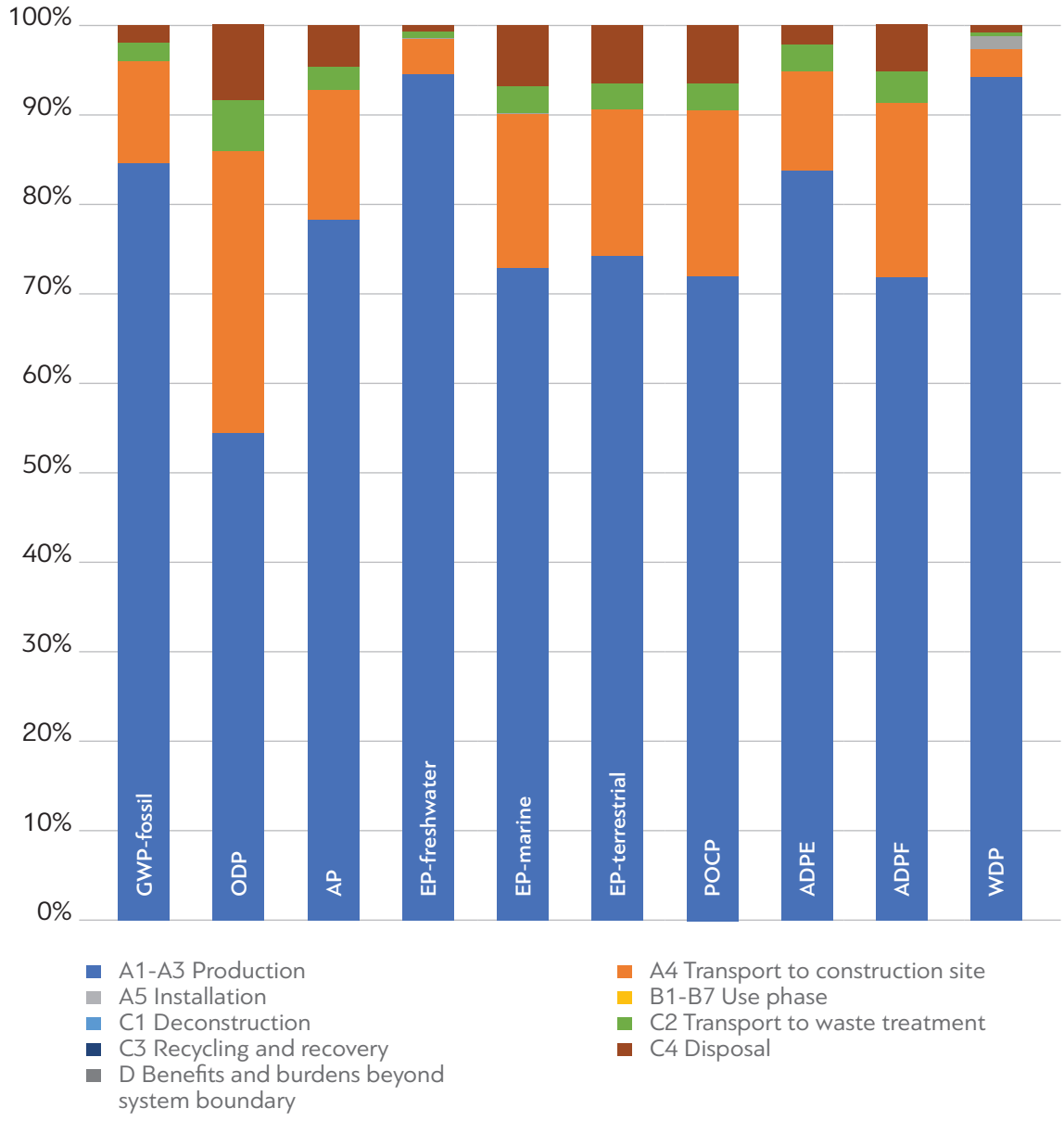
Relative contributions to the life cycle impacts of: Fine Repair 83



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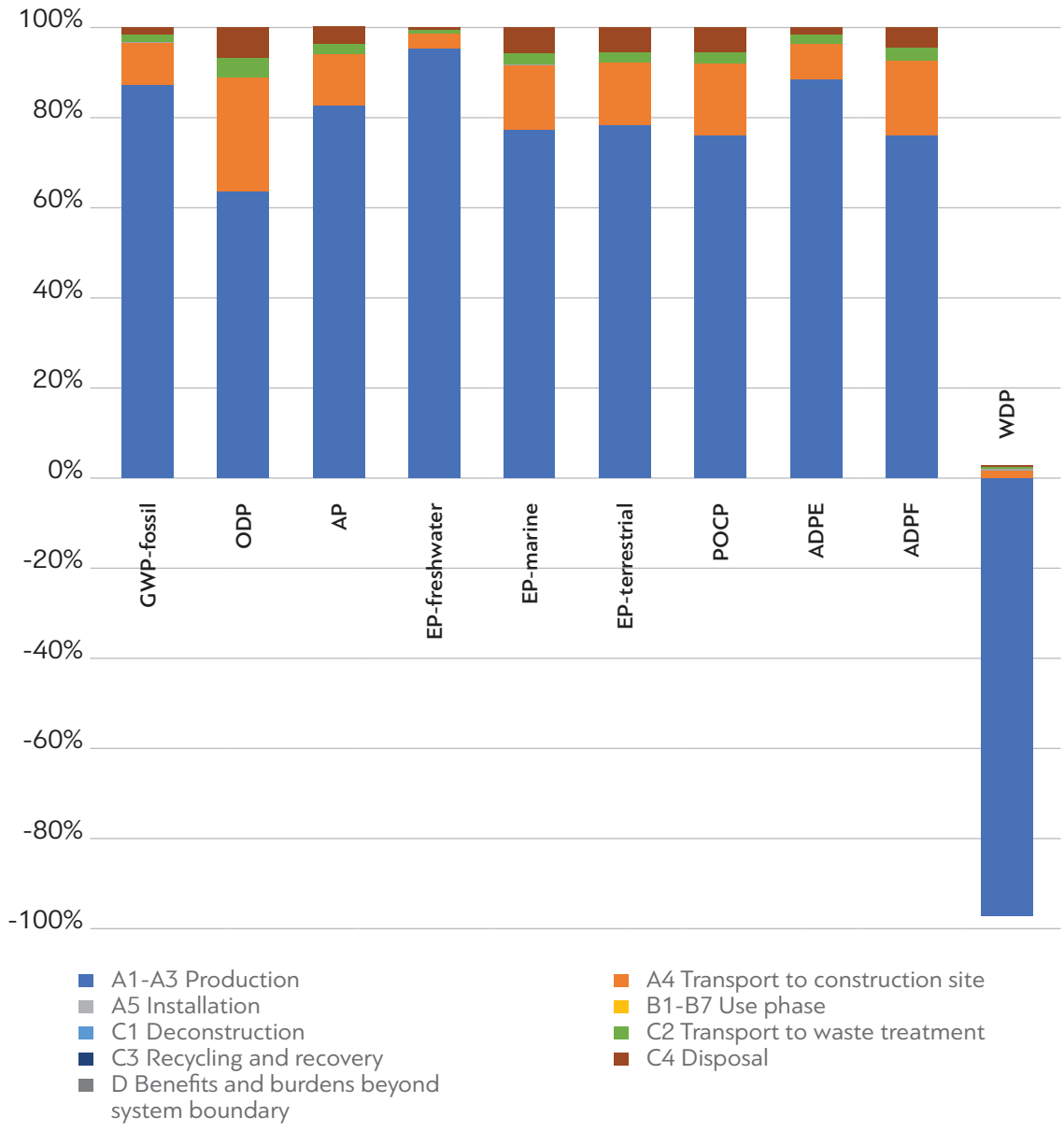
Relative contributions to the life cycle impacts of: Strong Repair 84



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Disclaimer 1: for the indicator IR

This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.

Disclaimer 2: for the indicators ADPE, ADPF, WDP, ETP-fw, HTP-c, HTP-nc, SQP

The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.

Revision Details:

17/6/2024. Addition of GWP-GHG indicators and new product certificates.
17/6/2025. Cement type change.

References

EN 15804: 2012+A2: 2019: Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products.

ISO 14025: 2006: Environmental labels and declarations - Type III environmental declarations - Principles and procedures.

ISO 15686-(several parts): Buildings and constructed assets - Service life planning.

ISO 14020:2000: Environmental labels and declarations - General principles.

ISO 14040:2006: Environmental management - Life cycle assessment - Principles and framework.

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ECHA: The Candidate List of substances of very high concern, available via https://echa.europa.eu/nl/-/four-newsubstances-added-to-the-candidate-list.

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ENVIRONMENTAL PRODUCT DECLARATION

According to ISO 14025 and EN 15804+A2

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Business Quality Verification P.C.

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