GlobalEPD

A VERIFIED ENVIRONMENTAL DECLARATION

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Environmental
Product
Declaration

EN ISO 14025:2010
EN 15804:2012+A1:2013

Repair mortars

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FOSROC

FOSROC EUCO, S.A.U.

The holder of this Declaration is responsible for its contents and for keeping the records and the documentation that supports the data and statements included during the validity period.

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GlobalEPD-RCP-006
European standard EN 15804:2012+A1:2013 serves as the basis for CPR

Independent verification of the Declaration and data, according to EN ISO 14025:2010

☐ Internal   ☑ **External**

Verification body

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1   General Information

1.1.   The organisation

The owner of this Environmental Product Declaration (EPD) is Fosroc Euco, S.A.U.

Fosroc Group, always at the forefront of chemical technology, focuses on designing effective solutions for repairing and installing concrete structures. Its solutions includes concrete repair mortars, resin anchors, grouts for foundations, waterproofing systems, flooring and coatings, adhesives and sealants, surface treatments and admixtures for concrete and mortar.

Fosroc Group has factories in more than 20 countries and has been providing construction solutions adapted to virtually any type of construction project for over 80 years, combining high-quality products with specialised technical support, customer service and innovation.

Fosroc products were first marketed in Spain in 1970. Its headquarters (offices, factory and laboratory) are in Izurza (Vizcaya).

Fosroc is committed to improving environmental performance throughout its organisation. Fosroc Euco, S.A.U.'s factory has implemented an Environmental Management System in accordance with ISO 14001.

1.2.   Scope of the Declaration

This Global EPD Declaration for repair mortars has been prepared with the yearly production weighted average data for each of the repair mortar references manufactured at Fosroc Euco, S.A.U.'s production centre in Izurza (Vizcaya).

The EPD is based on 2019 production data.

More specifically, it is the average of the eight repair mortar references manufactured by Fosroc Euco, S.A.U.

1.3.   Life cycle and compliance

This EPD has been developed and verified according to UNE-EN ISO 14025:2010 and UNE-EN 15804:2012+A1:2014 and Category Rules GlobalEPD-CPR-006_rev.1 Mortars.

It is a cradle-to-gate environmental declaration with the life-cycle stages shown in Table 1.

This Declaration may not be comparable to declarations developed in other programmes or using different reference documents, especially when such declarations have not been developed and verified in accordance with UNE-EN 15804.

Similarly, Environmental Declarations may not be comparable if the origin of the data is different (e.g. databases), not all relevant information modules are included, or they are not based on the same scenarios.

Product stage	A1	Raw material supply	X
	A2	Transport	X
	A3	Manufactoring	X
Constuction process stage	A4	Transport	MNE
	A5	Construction installation	MNE
Use stage	B1	Use	MNE
	B2	Maintenance	MNE
	B3	Repair	MNE
	B4	Replacement	MNE
	B5	Refurbishment	MNE
	B6	Operational energy use	MNE
	B7	Operational water use	MNE
End of life stage	C1	Deconstruction, demolition	MNE
	C2	Transport	MNE
	C3	Waste processing	MNE
	C4	Disposal	MNE
Benefits and loads beyond the system boundary	D	Reuse, recovery, recycling, potential	MNE

X = Module included in the LCA; NR: Not relevant module MNE= Module not evaluated

Table 1.
System boundaries. Information modules declared

2   Product

2.1.   Product identification

The product covered by this Declaration is a repair mortar, according to UNE-EN 1504-3 "Products and systems for the protection and repair of concrete structures. Structural and non-structural repairs", which sets out the technical characteristics.

According to the Central Product Classification (CPC), these repair mortars are classified under code 3751: "Non-refractory mortars and concretes".

The products covered by the EPD are shown in Table 2:

Product identification	Product designation
1	Patchroc GP
2	Renderoc LAF
3	Renderoc LAF-IC
4	Renderoc SF
5	Renderoc SFBD
6	Renderoc SFR
7	Renderoc TS
8	Renderoc TS-IC

Table 2. Products included in the LCA study.

Characteristics of the product referred to in the declaration:

- Product service life: 50 years

- Reference mass of material for end use: 2.2 kg/m^2

- Product density: 1250 kg/m^3

- Typical layer thickness: 7 - 60 mm

2.2.   Product perfomance

While quality reinforced concrete is highly durable, it can nevertheless deteriorate, most notably as a result of corrosion in reinforcements, a problem that can occur in any climate. Repair mortars may also be required for other reasons, such as ove loading or concreting defects.

Fosroc's repair mortars meet a range of needs in deteriorated concrete, helping to recover the structural integrity and initial geometry of the repaired element, while also improving its durability.

Repair mortars are applied to pillars, beams, slabs and other elements that, for whatever reason, have lost their original characteristics.

2.3.   Product composition

The mortar is composed of binders, mineral fillers and additives.

The virtual repair mortar analysed is for a yearly production weighted average of the references manufactured at Izurza production centre in Vizcaya.

Substance	Contents	Deviation
Aggregates	65,51%	3%
Cements	28,81%	13%
Silica fume	1,51%	85%
Others	4,17%	111%

Table 3. Main components of the product

The manufacturer declares that none of the components of the final product are included in the Candidate List of Substances of Very High Concern for authorisation of the REACH regulation.

3   LCA Information

3.1.   Life-cycle analysis

This environmental product declaration aims to assess and report the potential environmental impacts of repair mortar.

The EPD is based on a cradle-to-gate life-cycle analysis conducted in accordance to UNE-EN ISO 14044. Environmental Management. Life cycle assessment. Requirements and guidelines.

The EPDs prepared according to the Mortar Product Category Rules are based on information modules defined in UNE-EN 15804. Specifically, the product stage (modules A1-A3) is included, while the construction process stage (modules A4-A5), the use stage (modules B1-B7) and the end-of-life stage (modules C1-C4) are left out.

The data used in modelling the production processes were obtained in 2019. These data are a representative reflection of the company's activity in manufacturing the analysed product under study.

The Ecoinvent v3.4 database was used to select non-specific data such as raw material production. This EPD sets out the average performance of eight repair mortars produced by Fosroc Group at its Izurza plant. An individual calculation was completed for each product and a weighted average was then calculated according to production for each reference, in order to reference the data to 1 kg of mortar.

When calculating the LCA, the following methods were used to find the results with the Simapro programme by Pré Consultants (v.8.5.0).

Environmental parameter	Method
Descriptive parameters of environmental impacts	CML-IA baseline (Version 4.2)
Resource usage descriptor parameters	Cumulative Energy Demand
Parameters that describe the output streams	EDIP

Table 4. Calculation methods used

3.2.   Funcional or declared unit

The declared unit has been defined as: "**1 kg of packaged mortar**".

3.3.   Reference service life (RSL)

The defined reference service life is 50 years, as set out in the applicable PCR.

3.4.   Allocation and cut-off criteria

A physical criterion (mass) has been applied to assign the inputs and outputs of the production system to each product, based on production for the flows associated with the production process, such as energy consumption and waste generation.

As specified in EN 15804:2012+A1:2013, all materials or consumables that account for 1% of the unit process to be studied may be excluded.

3.5.   Data representativeness, quality and selection

The inventory data were provided directly by the company. In the case of unavailable primary data, theoretical calculations or estimates were completed or data from internationally renowned life-cycle inventory databases were assimilated. These data are for 2019 and are representative of the products analysed.

Variation between the different product references is over 10%, meaning the minimum and maximum impact values within the family, as well as the relevant deviations, will be declared, as specified in the PCR. This information is presented in Annexes I and II of this Declaration.

3.6. Other calculation rules and assumptions

A life-cycle analysis was performed on each product individually, and the results were then weighted according to production. Calculations were made for 1 kg of packaged mortar.

With regards to energy allocation, this section only has electricity consumption, which has been calculated by mass allocation of yearly production to the expenditure indicated in the invoices for this year *(2019)*.

Auxiliary materials solely for the production process under study *(*mainly greasing of machinery and filtering materials*)* have been calculated based on this section's production. Those used in more sectors at the factory *(*e.g. forklift maintenance*)* have been calculated for total factory production.

There are no assumptions about transport to site, stage of use or end of life, as these exceed the limits of the proposed system. It has been assumed that the trucks transporting raw materials to the plant are EURO IV category, as no information is available in this regard.

3.7. Deviations in impact results

The LCA results show the average environmental impacts associated with the products studied.

The products analysed indicate deviations of more than 10% above or below the weighted average, as shown in Table 5. Annexes I and II set out the maximum and minimum values according to the environmental impact category.

Impact category	Variation
ADPE	221%
ADPF	14%
GWP	10%
ODP	15%
POCP	17%
AP	16%
EP	17%
FW	32%
HWD	230%
NHWD	25%
RWD	20%
PERT	15%
PERNT	14%

Table 5. Variation with respect to the weighted average

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4 System boundaries, scenarios and additional technical information

The scope of the study is from cradle to gate, covering only the manufacturing module.

4.1. Upstream processes and product manufacturing (A1-A3)

The cement and aggregates arrive in tanker trucks. The main raw materials are pumped pneumatically into silos from the tanker trucks.

From here, the raw materials are transferred to a dosing silo thanks to a screw conveyor that weighs the required quantities, which are conveyed to the mixer by gravity. Minority raw materials are added manually at this point. From the mixer, the mortar is transferred to the packer by a screw conveyor. Finally, the bags are palletised and covered with plastic film.

The dust generated during the production process is sucked through a duct to a sleeve filter that retains the dust, discharging clean air to the outside; this is the reason why particle emissions have not been considered.

The waste generated in production comes mainly from the packaging for the additives used in manufacturing the mortar, waste from the product itself, or remains of packaging that has reached its end of life.

4.2. Transport and construction process (A4-A5)

Modules A4-A5 not evaluated.

4.3. Use related to the building structure

Modules B1-B5 not evaluated.

4.4. Use related to operation of the building

Modules B6-B7 not evaluated.

4.5. End of life

Modules C1-C4 not evaluated.

4.6. Benefits and loads beyond the building system boundaries

Module D not evaluated.

5 LCA and LCI environmental parameter declaration

The estimated impact results are relative and do not indicate the final value of the impact categories, nor do they refer to threshold values, safety margins or risks.

	A1-A3 (Total)	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP	4,02E-01	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
ODP	2,46E-08	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
AP	1,31E-03	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
EP	3,94E-04	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
POCP	5,95E-05	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
ADPE	2,20E-06	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
ADPF	3,09E+00	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE

GWP	[kg CO_2 eq]	Global warming potential
ODP	[kg CFC-11 eq]	Stratospheric ozone layer depletion potential
AP	[kg SO_2 eq]	Acidification potential of soil and water resources
EP	[kg $(PO_4)^{3-}$ eq]	Eutrophication potential
POCP	[kg etileno eq]	Tropospheric ozone formation potential
ADPE	[kg Sb eq]	Abiotic resource depletion potential for non-fossil resources (ADP-elements)
ADPF	[MJ]	Abiotic resource depletion potential for fossil resources (ADP-fossil fuels)

Table 6. Parameters describing the environmental impacts according to UNE-EN 15804

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	A1-A3 (Total)	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	3,13E-01	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
PERM	0,00E+00	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
PERT	3,13E-01	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
PENRE	3,44E+00	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
PENRM	2,37E-01	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
PENRT	3,68E+00	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
SM	0,00E+00	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
RSF	0,00E+00	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
NRSF	0,00E+00	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
FW	1,06E-01	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE

PERE	*[MJ]*	Use of renewable primary energy excluding renewable primary energy resources used as raw materials
PERM	*[MJ]*	Use of renewable primary energy used as raw material
PERT	*[MJ]*	Total use of renewable primary energy
PENRE	*[MJ]*	Use of non-renewable primary energy, excluding non-renewable primary energy resources used as raw materials
PENRM	*[MJ]*	Use of non-renewable primary energy used as raw material
PENRT	*[MJ]*	Total use of non-renewable primary energy
SM	*[Kg]*	Use of secondary materials
RSF	*[MJ]*	Use of renewable secondary fuels
NRSF	*[MJ]*	Use of non-renewable secondary fuels
FW	*[m³]*	Use of net fresh water.

Table 10. Parameters describing the use of resources

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	A1-A3 (Total)	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
HWD	5,48E-06	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
NHWD	1,37E-01	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
RWD	1,49E-05	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
CRU	0,00E+00	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
MFR	0,00E+00	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
MER	0,00E+00	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
EE	0,00E+00	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
EET	0,00E+00	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE

HWD	[kg]	Hazardous waste disposed
NHWD	[kg]	Non-hazardous waste disposed
RWD	[kg]	Radioactive waste disposed
CRU	[kg]	Components for reuse
MFR	[kg]	Materials for reciclying
MER	[kg]	Materials for energy recovery
EE	[MJ]	Exported energy
EET	[MJ]	Exported energy thermal

Table 8. Parameters describing output flows and waste categories

Annex I   LCA and LCI environmental parameter statements for MINIMUM environmental impact format

This annex contains the parameters for the references with minimum impact value for the global warming category, with a variation of more than 10% with respect to the family average.

	A1-A3 *(Total)*	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP	2,88E-01	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
ODP	1,93E-08	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
AP	9,94E-04	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
EP	2,87E-04	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
POCP	4,19E-05	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
ADPE	1,36E-06	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
ADPF	2,23E+00	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE

GWP *[kg CO_2 eq]* — Global warming potential

ODP *[kg CFC-11 eq]* — Stratospheric ozone layer depletion potential

AP *[kg SO_2 eq]* — Acidification potential of soil and water resources

EP *[kg $(PO_4)^{3-}$ eq]* — Eutrophication potential

POCP *[kg etileno eq]* — Tropospheric ozone formation potential

ADPE *[kg Sb eq]* — Abiotic resource depletion potential for non-fossil resources *(ADP-elements)*

ADPF *[M]]* — Abiotic resource depletion potential for fossil resources *(ADP-fossil fuels)*

Table 9. Parameters describing the environmental impacts according to UNE-EN 15804

	A1-A3 (Total)	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	2,32E-01	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
PERM	0,00E+00	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
PERT	2,32E-01	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
PENRE	2,42E+00	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
	6,24E-02	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
PENRT	2,64E+00	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
SM	0,00E+00	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
RSF	0,00E+00	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
NRSF	0,00E+00	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
FW	7,49E-02	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE

PERE *[M]]*   Use of renewable primary energy excluding renewable primary energy resources used as raw materials

PERM *[M]]*   Use of renewable primary energy used as raw material

PERT *[M]]*   Total use of renewable primary energy

PENRE *[M]]*   Use of non-renewable primary energy, excluding non-renewable primary energy resources used as raw materials

PENRM *[M]]*   Use of non-renewable primary energy used as raw material

PENRT *[M]]*   Total use of non-renewable primary energy

SM *[Kg]*   Use of secondary materials

RSF *[M]]*   Use of renewable secondary fuels

NRSF *[M]]*   Use of non-renewable secondary fuels

FW *[m³]*   Use of net fresh water.

Table 10. Parameters describing the use of resources

		A1-A3 (Total)	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
	HWD	3,27E-06	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
	NHWD	1,08E-01	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
	RWD	1,19E-05	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
	CRU	0,00E+00	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
	MFR	0,00E+00	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
	MER	0,00E+00	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
	EE	0,00E+00	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
	EET	0,00E+00	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE

HWD	[kg]	Hazardous waste disposed
NHWD	[kg]	Non-hazardous waste disposed
RWD	[kg]	Radioactive waste disposed
CRU	[kg]	Components for reuse
MFR	[kg]	Materials for reciclying
MER	[kg]	Materials for energy recovery
EE	[MJ]	Exported energy
EET	[MJ]	Exported energy thermal

Table 11. Parameters describing output flows and waste categories

Annex II   LCA and LCI environmental parameter for MAXIMUM environmental impact format

This annex contains the parameters for the references with maximum impact value for the global warning category, with avariation of more that 10% with respect to the family average.

	A1-A3 (Total)	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP	4,42E-01	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
ODP	2,83E-08	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
AP	1,53E-03	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
EP	4,62E-04	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
POCP	6,99E-05	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
ADPE	7,08E-06	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
ADPF	3,53E+00	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE

GWP	$[kg\ CO_2\ eq]$	Global warming potential
ODP	[kg CFC-11 eq]	Stratospheric ozone layer depletion potential
AP	$[kg\ SO_2\ eq]$	Acidification potential of soil and water resources
EP	$[kg\ (PO_4)^{3-}\ eq]$	Eutrophication potential
POCP	[kg etileno eq]	Tropospheric ozone formation potential
ADPE	[kg Sb eq]	Abiotic resource depletion potential for non-fossil resources (ADP-elements)
ADPF	[MJ]	Abiotic resource depletion potential for fossil resources (ADP-fossil fuels)

Table 12. Parameters describing the environmental impacts according to UNE-EN 15804

	A1-A3 *(Total)*	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	3,59E-01	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
PERM	0,00E+00	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
PERT	3,59E-01	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
PENRE	3,98E+00	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
	5,53E-01	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
PENRT	4,19E+00	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
SM	0,00E+00	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
RSF	0,00E+00	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
NRSF	0,00E+00	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
FW	1,41E-01	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE

PERE	*[M]]*	Use of renewable primary energy excluding renewable primary energy resources used as raw materials
PERM	*[M]]*	Use of renewable primary energy used as raw material
PERT	*[M]]*	Total use of renewable primary energy
PENRE	*[M]]*	Use of non-renewable primary energy, excluding non-renewable primary energy resources used as raw materials
PENRM	*[M]]*	Use of non-renewable primary energy used as raw material
PENRT	*[M]]*	Total use of non-renewable primary energy
SM	*[Kg]*	Use of secondary materials
RSF	*[M]]*	Use of renewable secondary fuels
NRSF	*[M]]*	Use of non-renewable secondary fuels
FW	*[m³]*	Use of net fresh water.

Table 13. Parameters describing the use of resources

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	A1-A3 *(Total)*	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
HWD	1,81E-05	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
NHWD	1,58E-01	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
RWD	1,59E-05	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
CRU	0,00E+00	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
MFR	0,00E+00	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
MER	0,00E+00	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
EE	0,00E+00	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE
EET	0,00E+00	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE	MNE

HWD	*[kg]*	Hazardous waste disposed
NHWD	*[kg]*	Non-hazardous waste disposed
RWD	*[kg]*	Radioactive waste disposed
CRU	*[kg]*	Components for reuse
MFR	*[kg]*	Materials for reciclying
MER	*[kg]*	Materials for energy recovery
EE	*[MJ]*	Exported energy
EET	*[MJ]*	Exported energy thermal

Table 14. Parameters describing output flows and waste categories

References

[1] General Rules of the GlobalEPD Programme, 2nd revision. AENOR. February 2016.

[2] UNE-EN ISO 14025:2010. Environmental labels and declarations. Type III Environmental declarations. Principles and procedures (ISO 14025:2006).

[3] UNE-EN 15804:2012+A1:2014 Sustainability of construction works. Environmental product declarations. Core rules for the product category of construction products.

[4] GlobalEPD-RCP-006 Mortars, rev.1. AENOR. November 2017.

[5] Life-cycle analysis of the family of repair mortars produced by Fosroc Euco, S.A.U. July 2020. Version 1.

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