

ENVIRONMENTAL PRODUCT DECLARATION

INTERIORS PAINTS



ECOCAP

ECOCAP BIANCO

ECOCAP BASE AC16 PHC

ECOCAP BASE AC16 SCURO

ECOCAP BASE AC16 INCOLORE

*Programme: The International EPD® System
Programme Operator: EPD International AB*

*CPC 3511 - Paints and varnishes and related products
PCR 2019:14: "Construction products" version 1.11*

Geographical scope: Global

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"An EPD should provide up-to-date information and could be updated if conditions change. The declared validity is therefore subject to continuous registration and publication on www.envIRONDEC.com."

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Environmental Product Declaration

1.

INTRODUCTION

Type III Environmental Declarations contain verifiable and accurate information on the environmental performance of a product, quantified based on a life cycle impact assessment.

Their aim is to produce reliable information, expressed on a common basis, which enables a comparison of environmental performance between products performing the same function. In this perspective of product sustainability, Type III Environmental Declarations are developed in accordance with the requirements and prescriptions of the voluntary standard UNI EN ISO 14025:2010 and to ensure that LCA studies are carried out consistently for all products within the same category, precise rules and methodologies are required. These rules are set out in the Product Category Rules (PCRs), which specify how a life cycle analysis should be carried out for a specific product category and ensure that the results are consistent and comparable.

2.

COMPANY AND PRODUCT INFORMATION



HISTORY



THE COMPANY TODAY



CERTIFICATIONS



ENVIRONMENTAL POLICY

2.1 THE COMPANY

1950



HISTORY

Passion, professionalism and quality are the values of CAP Arreghini's growth path. A history that has its roots in the distant 1950s, when the founder Adolfo Arreghini, a painter and expert restorer trained in Venice, began to produce his own colours for his profession. Over the years the company has grown, evolving and adapting to the needs of the market, meeting and even anticipating them, becoming a joint stock company in 1988. CAP Arreghini has been able to interpret the changes in society by combining technological evolution with the tradition of reliability and entrepreneurship.

2.1 THE COMPANY

TODAY



THE COMPANY

CAP Arreghini SpA, with its 70 years of experience and advanced know-how, is an efficient and well-structured company that devotes great attention to technological innovation, research and development of solutions offering high performance, excellent yield and maximum safety, with particular regard to environmental issues. All production is 100% Made in Italy, a value that expresses the great commitment to the entire production cycle and its complexities. Leader in distribution and sales network on the national scene, CAP Arreghini SpA stands out for its complete and varied range of products, intended for the most diverse applications, confirming the professionalism and reliability that distinguish it. CAP Arreghini's solid distribution system ensures fast deliveries and a highly efficient service for the national and international markets. Attention to consumer dynamics and the evolution of markets continue to ensure CAP Arreghini an excellent level of competitiveness.

2.1 THE COMPANY

UNI EN ISO



CERTIFICATIONS

CAP Arreghini has a strong culture of quality that manifests itself in all aspects of doing business, through a constant process of improvement and innovation. From the careful selection of suppliers and materials through to the finished product and its distribution, all stages are constantly monitored according to a strict control system that guarantees the perfect balance between compliance with the imposed regulatory parameters and the required performance. CAP Arreghini SpA enjoys ISO 9001 and ISO 14001 System Certifications, which attest to the achievement of excellent standards in organisation, processes and environmental issues. It is our firm belief that work activities should not affect the surrounding environment and that hazardous or potentially hazardous situations should be monitored in order to continuously improve our environmental impact and aim for continuous improvement in this context. With a view to reducing environmental impact, the company's efforts are currently focused on the development of environmentally friendly products, linked to the reduction of VOC - Volatile Organic Compounds - emissions into the atmosphere and to recent green building regulations. All this testifies to the great commitment to careful and responsible management and production, in order to always offer reliable, high-performance and safe solutions.

2.1 THE COMPANY

THE ENVIRONMENT



ENVIRONMENTAL POLICY

Respect for people and the environment is a priority to which CAP Arreghini devotes constant attention. A number of procedures aimed at continuous improvement of environmental performance have been in place for several years:

- *Research commitment to the progressive reduction in formulations of substances harmful to the environment and humans, both during production and subsequent application.*
- *Development of building systems that offer high insulation performance while reducing energy consumption for heating and cooling homes.*
- *Development of increasingly high-performance and long-lasting products to increase the interval between maintenance operations.*
- *Search for UNI EN ISO 14001:2015 certified raw material suppliers who are located as close as possible to the CAP Arreghini production site to minimise road transport.*
- *Designing the layout of the building to help reduce noise, exhaust fumes and traffic entering and leaving the building.*
- *Receipt and unloading of liquid raw materials with a totally closed loop with double controls to eliminate any possibility of spillage.*
- *Almost totally closed loop production, minimising atmospheric pollutant emissions.*
- *Recovery of production tails and their distillation for reuse of the recovered solvent in the production cycle.*
- *Recovery of rainwater from the drainage areas for internal washing of the equipment used for processing.*
- *Separate collection of waste and contracting of waste disposal to UNI EN ISO 14001:2015 certified companies.*

In addition to all this, CAP Arreghini is very sensitive to the issue of waste because, as a chemical company, it considers as a crucial factor its involvement and commitment to the protection of the working environment and the territory in which the company is located. All are committed to keeping waste production as low as possible, as well as reducing energy and water consumption, using less paper and fuel, and reducing noise in all its forms.

2.2 PRODUCTS

Cap Arreghini designs, manufactures and distributes paint products for building constructions and wooden or iron structures, ensuring the pleasure of the aesthetic effect, attention to human well-being and respect for the environment. This EPD covers a range of exterior paints that can be grouped as follows:

COLOUR VARIANTS

TABLE 1: COLOUR VARIANTS INCLUDED IN THE EPD



ECOCAP
(washable interior paint)

- ECOCAP BIANCO
- ECOCAP BASE AC16 PHC
- ECOCAP BASE AC 16 SCURO
- ECOCAP BASE AC 16 INCOLORE

COMPOSITION

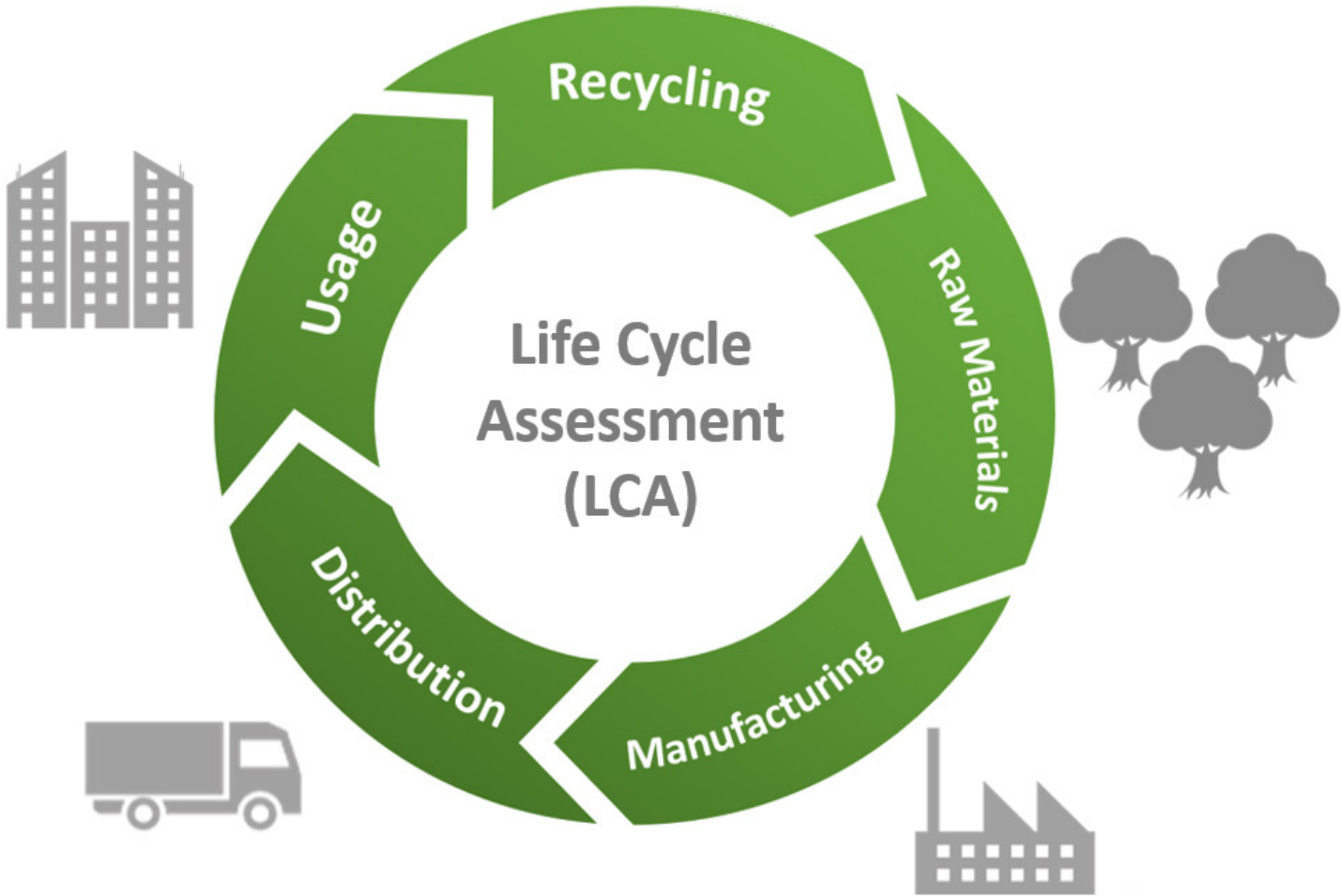
TABLE 2 - DECLARATION OF CONTENTS FOR 1 KG

ECOCAP BIANCO		%
RAW MATERIALS*	Water	30-40%
	Fillers and pigment	45-55%
	Resins	5-20%
	Additives	1-5%
ECOCAP BIANCO		Kg/kg
PACKAGING*	Polypropylene	4,86E-02
	Polyethylene	5,88E-04
	Wood	4,71E-02

The analysed product can be sold in different formats. The table shows an average weight, calculated as an average of the formats.

LCA

Life Cycle Assessment



3.

LCA INFORMATION

3.1 DECLARED UNIT

The declared unit is equal to 1 kg of paint product (packaging included).

3.2 REFERENCE SERVICE LIFE

Not applicable.

3.3 TEMPORAL BOUNDARIES

The temporal boundaries include the period from January 2020 to December 2020, a time frame considered to be representative of the company's activities. These were chosen given the fullest availability of information relating to the analysis.

3.4 SYSTEM BOUNDARIES

In accordance with the reference standard UNI EN 15804 and the PCR followed, the environmental impact assessment of product life cycle is of the type “from cradle to gate with modules C1-C4 and module D” (Figure 1). Modules A4-A5 and B1-B7 were excluded.

	PRODUCT STAGE			CONSTRUCTI ON PROCESS STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARIES	
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Decostrunction, demolition	Transport	Waste processing	Disposal	Reuse-recovery- recycling potential	
	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4		D
	X	X	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	X	X	X	X		X
Geography	GLO	GLO	IT	-	-	-	-	-	-	-	-	-	-	IT	IT	IT	IT	
Specific data used	>90%			-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Variation – product	not relevant			-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Variation – site	not relevant			-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Figura 1: ND= Module not declared

TABLE 4

MODULE	INDICATOR	UPSTREAM
A1 – Raw material supply	Materia prima	
	Consumo energia elettrica	
A2 – Transport	Trasporto materia prima e imballaggi	CORE
A3 - Manufacturing	Materia (imballaggi)	
	Trasporto rifiuti generati	
	Trattamento rifiuti generati	END OF LIFE
C1 - De-construction demolition	Consumi legati alla demolizioni	
C2 - Transport	Trasporto dei rifiuti	
C3 - Waste processing	Trattamento dei rifiuti	
C4 - Disposal	Smaltimento	

4.

ENVIRONMENTAL PERFORMANCE

Flows related to make-up water from the mains for washing and dust emissions from chimneys were not accounted for in the study. In addition, the usage phases (B1-B7) were not included in the study, as the paint products are applied manually and directly onto the object and do not require maintenance or repair work, nor do they involve consumption of energy or water. The scenarios adopted for modelling modules C1, C2, C3, C4 and D were considered and assumed as follows:

- Impacts associated with demolition (C1) are assumed to be negligible (after application, the product is physically integrated with other materials and cannot be physically separated from them at the end of its life).
- The product is sent to end-of-life with an EWC code from Chapter 17 (Dlgs 152/2006), it is therefore assumed a 100% landfill scenario at a distance of 53.1 km.
- After demolition activities, the product is not recovered (C3).
- After demolition activities, the product is entirely disposed of.
- The result of phase D is zero, because there are no end-of-life benefits (recycling, recovery and/or reuse).

3.5 SYSTEM DIAGRAM AND PRODUCTION PROCESSES

For each information module, characteristic environmental performance indicators were investigated. In selecting the data to be used for the study, preference was given to primary data that could be catalogued by the company. This data is the primary source of information for inventory analysis. The latter can be grouped according to environmental performance indicators, to which the results of environmental performance will then be referred. Based on these indicators, the software model was elaborated and the inventory analysis was then developed according to macro-consumptions referring to the declared unit that characterises the study. The production block diagram is presented below (Figure 2).



Figure 2

3.6 DATABASES AND SOFTWARE

The SimaPro calculation software (SimaPro 9) was used to process the inventory and calculate the environmental profiles, and the following databases were selected: "ECOINVENT", "ELCD".



4.1 POTENTIAL ENVIRONMENTAL IMPACTS

Below are the results of the environmental profile obtained from the life cycle analysis of the products subject to the environmental declaration, regarding the impact categories in accordance with UNI EN 15804.



ECOCAP BIANCO

TABLE 4: Breakdown of impact assessment results by environmental performance indicators with reference to the declared unit in the investigated information modules.

IMPACT CATEGORY	UNITS	A1-A3	C1	C2	C3	C4	TOTAL	D
Climate change	kg CO ₂ eq	9,96E-01	0,00E+00	9,62E-03	0,00E+00	1,22E+00	2,22E+00	0,00E+00
Climate change - Fossil	kg CO ₂ eq	1,06E+00	0,00E+00	9,59E-03	0,00E+00	3,03E-01	1,37E+00	0,00E+00
Climate change - Biogenic	kg CO ₂ eq	-6,58E-02	0,00E+00	2,56E-05	0,00E+00	9,13E-01	8,47E-01	0,00E+00
Climate change - Land use and LU change	kg CO ₂ eq	2,86E-03	0,00E+00	3,80E-06	0,00E+00	2,41E-05	2,88E-03	0,00E+00
Ozone depletion	kg CFC11 eq	1,15E-07	0,00E+00	2,24E-09	0,00E+00	6,56E-09	1,24E-07	0,00E+00
Acidification	mol H+ eq	2,01E-02	0,00E+00	4,86E-05	0,00E+00	3,43E-04	2,05E-02	0,00E+00
Eutrophication, freshwater*	kg P eq	3,12E-04	0,00E+00	6,23E-07	0,00E+00	2,92E-05	3,42E-04	0,00E+00
Eutrophication, marine	kg N eq	1,23E-03	0,00E+00	1,67E-05	0,00E+00	1,19E-03	2,44E-03	0,00E+00
Eutrophication, terrestrial	mol N eq	1,11E-02	0,00E+00	1,83E-04	0,00E+00	1,33E-03	1,26E-02	0,00E+00
Photochemical ozone formation	kg NMVOC eq	3,86E-03	0,00E+00	4,46E-05	0,00E+00	4,72E-04	4,37E-03	0,00E+00
Resource use, minerals and metals	kg Sb eq	8,07E-06	0,00E+00	3,36E-08	0,00E+00	1,23E-07	8,23E-06	0,00E+00
Resource use, fossils	MJ	1,84E+01	0,00E+00	1,46E-01	0,00E+00	5,27E-01	1,91E+01	0,00E+00
Water use	m3 depriv.	1,29E+00	0,00E+00	4,38E-04	0,00E+00	3,07E-02	1,32E+00	0,00E+00
Particulate matter	disease inc.	7,40E-08	0,00E+00	6,91E-10	0,00E+00	9,22E-09	8,39E-08	0,00E+00
Ionising radiation	kBq U-235 eq	1,21E-01	0,00E+00	7,52E-04	0,00E+00	2,74E-03	1,24E-01	0,00E+00
Ecotoxicity, freshwater	CTUe	2,63E+01	0,00E+00	1,14E-01	0,00E+00	3,02E+01	5,66E+01	0,00E+00
Human toxicity, non-cancer	CTUh	1,45E-08	0,00E+00	1,19E-10	0,00E+00	4,79E-09	1,94E-08	0,00E+00
Human toxicity, cancer	CTUh	2,90E-09	0,00E+00	3,69E-12	0,00E+00	3,54E-10	3,26E-09	0,00E+00
Land use	Pt	1,38E+01	0,00E+00	1,04E-01	0,00E+00	6,24E-01	1,45E+01	0,00E+00

the results in kg PO_e eq. are obtained by multiplying the results in kg P eq. with a factor of 3.07.

ECOCAP BIANCO

TABLE 5: Breakdown of the results of the use of resources with reference to the declared unit in the investigated information modules.

PARAMETERS	UNIT OF MEASUREMENT	A1-A3	C1	C2	C3	C4	TOTAL	D
PERE	MJ	1,80E+00	0,00E+00	2,06E-03	0,00E+00	8,40E-01	2,64E+00	0,00E+00
PERM	MJ	8,24E-01	0,00E+00	0,00E+00	0,00E+00	-8,24E-01	0,00E+00	0,00E+00
PERT	MJ	2,62E+00	0,00E+00	2,06E-03	0,00E+00	1,68E-02	2,64E+00	0,00E+00
PENRE	MJ	1,61E+01	0,00E+00	1,46E-01	0,00E+00	2,78E+00	1,91E+01	0,00E+00
PENRM	MJ	2,25E+00	0,00E+00	0,00E+00	0,00E+00	-2,25E+00	0,00E+00	0,00E+00
PENRT	MJ	1,84E+01	0,00E+00	1,46E-01	0,00E+00	5,27E-01	1,91E+01	0,00E+00
SM	Kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	m³	3,26E-02	0,00E+00	1,52E-05	0,00E+00	7,49E-04	3,33E-02	0,00E+00

PERE = Use of renewable primary energy resources excluding primary renewable energy resources used as feedstocks; PERM = Use of renewable primary energy resources as feedstocks; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy resources excluding primary non-renewable energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources as raw materials; PENRT = Total use of non-renewable primary energy resources; SM = Use of secondary materials; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of fresh water.

ECOCAP BIANCO

TABLE 6: Waste breakdown with reference to the declared unit in the investigated information modules.

PARAMETERS	UNIT OF MEASUREMENT	A1-A3	C1	C2	C3	C4	TOTAL	D
HWD	Kg	1,97E-05	0,00E+00	3,82E-07	0,00E+00	1,62E-06	2,17E-05	0,00E+00
NHWD	Kg	7,55E-01	0,00E+00	7,52E-03	0,00E+00	6,45E-01	1,41E+00	0,00E+00
RWD	Kg	5,59E-05	0,00E+00	9,89E-07	0,00E+00	2,66E-06	5,96E-05	0,00E+00

HWD = Hazardous Waste Disposed; NHWD = Non-Hazardous Waste Disposed; RWD = Radioactive Waste Disposed.

ECOCAP BIANCO

TABLE 7: Breakdown of output streams with reference to the declared unit along the investigated information modules.

PARAMETERS	UNIT OF MEASUREMENT	A1-A3	C1	C2	C3	C4	TOTAL	D
CRU	Kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	Kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MER	Kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EET	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
CRU	Kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

CRU = Components for Reuse; MFR = Materials for Recycling; MER = Materials for Energy Recovery; EEE = Exported Electrical Energy; EET = Exported Thermal Energy.

ECOCAP BASE AC16 PHC

TABLE 8: Breakdown of impact assessment results by environmental performance indicators with reference to the declared unit in the investigated information modules.

IMPACT CATEGORY	UNITS	A1-A3	C1	C2	C3	C4	TOTAL	D
Climate change	kg CO ₂ eq	9,96E-01	0,00E+00	9,62E-03	0,00E+00	1,22E+00	2,22E+00	0,00E+00
Climate change - Fossil	kg CO ₂ eq	1,06E+00	0,00E+00	9,59E-03	0,00E+00	3,03E-01	1,37E+00	0,00E+00
Climate change - Biogenic	kg CO ₂ eq	-6,58E-02	0,00E+00	2,56E-05	0,00E+00	9,13E-01	8,47E-01	0,00E+00
Climate change - Land use and LU change	kg CO ₂ eq	2,86E-03	0,00E+00	3,80E-06	0,00E+00	2,41E-05	2,88E-03	0,00E+00
Ozone depletion	kg CFC11 eq	1,15E-07	0,00E+00	2,24E-09	0,00E+00	6,56E-09	1,24E-07	0,00E+00
Acidification	mol H+ eq	2,01E-02	0,00E+00	4,86E-05	0,00E+00	3,43E-04	2,05E-02	0,00E+00
Eutrophication, freshwater*	kg P eq	3,12E-04	0,00E+00	6,23E-07	0,00E+00	2,92E-05	3,42E-04	0,00E+00
Eutrophication, marine	kg N eq	1,23E-03	0,00E+00	1,67E-05	0,00E+00	1,19E-03	2,44E-03	0,00E+00
Eutrophication, terrestrial	mol N eq	1,11E-02	0,00E+00	1,83E-04	0,00E+00	1,33E-03	1,26E-02	0,00E+00
Photochemical ozone formation	kg NMVOC eq	3,86E-03	0,00E+00	4,46E-05	0,00E+00	4,72E-04	4,37E-03	0,00E+00
Resource use, minerals and metals	kg Sb eq	8,07E-06	0,00E+00	3,36E-08	0,00E+00	1,23E-07	8,23E-06	0,00E+00
Resource use, fossils	MJ	1,84E+01	0,00E+00	1,46E-01	0,00E+00	5,27E-01	1,91E+01	0,00E+00
Water use	m3 depriv.	1,29E+00	0,00E+00	4,38E-04	0,00E+00	3,07E-02	1,32E+00	0,00E+00
Particulate matter	disease inc.	7,40E-08	0,00E+00	6,91E-10	0,00E+00	9,22E-09	8,39E-08	0,00E+00
Ionising radiation	kBq U-235 eq	1,21E-01	0,00E+00	7,52E-04	0,00E+00	2,74E-03	1,24E-01	0,00E+00
Ecotoxicity, freshwater	CTUe	2,63E+01	0,00E+00	1,14E-01	0,00E+00	3,02E+01	5,66E+01	0,00E+00
Human toxicity, non-cancer	CTUh	1,45E-08	0,00E+00	1,19E-10	0,00E+00	4,79E-09	1,94E-08	0,00E+00
Human toxicity, cancer	CTUh	2,90E-09	0,00E+00	3,69E-12	0,00E+00	3,54E-10	3,26E-09	0,00E+00
Land use	Pt	1,38E+01	0,00E+00	1,04E-01	0,00E+00	6,24E-01	1,45E+01	0,00E+00

the results in kg PO₄ eq. are obtained by multiplying the results in kg P eq. with a factor of 3.07.

ECOCAP BASE AC16 PHC

TABLE 9: Breakdown of the results of the use of resources with reference to the declared unit in the investigated information modules.

PARAMETERS	UNIT OF MEASUREMENT	A1-A3	C1	C2	C3	C4	TOTAL	D
PERE	MJ	1,80E+00	0,00E+00	2,06E-03	0,00E+00	8,40E-01	2,64E+00	0,00E+00
PERM	MJ	8,24E-01	0,00E+00	0,00E+00	0,00E+00	-8,24E-01	0,00E+00	0,00E+00
PERT	MJ	2,62E+00	0,00E+00	2,06E-03	0,00E+00	1,68E-02	2,64E+00	0,00E+00
PENRE	MJ	1,61E+01	0,00E+00	1,46E-01	0,00E+00	2,78E+00	1,91E+01	0,00E+00
PENRM	MJ	2,25E+00	0,00E+00	0,00E+00	0,00E+00	-2,25E+00	0,00E+00	0,00E+00
PENRT	MJ	1,84E+01	0,00E+00	1,46E-01	0,00E+00	5,27E-01	1,91E+01	0,00E+00
SM	Kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	m³	3,26E-02	0,00E+00	1,52E-05	0,00E+00	7,49E-04	3,33E-02	0,00E+00

PERE = Use of renewable primary energy resources excluding primary renewable energy resources used as feedstocks; PERM = Use of renewable primary energy resources as feedstocks; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy resources excluding primary non-renewable energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources as raw materials; PENRT = Total use of non-renewable primary energy resources; SM = Use of secondary materials; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of fresh water.

ECOCAP BASE AC16 PHC

TABLE 10: Waste breakdown with reference to the declared unit in the investigated information modules.

PARAMETERS	UNIT OF MEASUREMENT	A1-A3	C1	C2	C3	C4	TOTAL	D
HWD	Kg	1,97E-05	0,00E+00	3,82E-07	0,00E+00	1,62E-06	2,17E-05	0,00E+00
NHWD	Kg	7,55E-01	0,00E+00	7,52E-03	0,00E+00	6,45E-01	1,41E+00	0,00E+00
RWD	Kg	5,59E-05	0,00E+00	9,89E-07	0,00E+00	2,66E-06	5,96E-05	0,00E+00

HWD = Hazardous Waste Disposed; NHWD = Non-Hazardous Waste Disposed; RWD = Radioactive Waste Disposed.

ECOCAP BASE AC16 PHC

TABLE 11: Breakdown of output streams with reference to the declared unit along the investigated information modules.

PARAMETERS	UNIT OF MEASUREMENT	A1-A3	C1	C2	C3	C4	TOTAL	D
CRU	Kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	Kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MER	Kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EET	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
CRU	Kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

CRU = Components for Reuse; MFR = Materials for Recycling; MER = Materials for Energy Recovery; EEE = Exported Electrical Energy; EET = Exported Thermal Energy.

ECOCAP BASE AC 16 SCURO

TABLE 12: Breakdown of impact assessment results by environmental performance indicators with reference to the declared unit in the investigated information modules.

IMPACT CATEGORY	UNITS	A1-A3	C1	C2	C3	C4	TOTAL	D
Climate change	kg CO ₂ eq	4,22E-01	0,00E+00	9,62E-03	0,00E+00	1,22E+00	1,65E+00	0,00E+00
Climate change - Fossil	kg CO ₂ eq	6,32E-01	0,00E+00	9,59E-03	0,00E+00	3,03E-01	9,44E-01	0,00E+00
Climate change - Biogenic	kg CO ₂ eq	-2,13E-01	0,00E+00	2,56E-05	0,00E+00	9,13E-01	7,00E-01	0,00E+00
Climate change - Land use and LU change	kg CO ₂ eq	3,25E-03	0,00E+00	3,80E-06	0,00E+00	2,41E-05	3,28E-03	0,00E+00
Ozone depletion	kg CFC11 eq	6,60E-08	0,00E+00	2,24E-09	0,00E+00	6,56E-09	7,48E-08	0,00E+00
Acidification	mol H+ eq	8,50E-03	0,00E+00	4,86E-05	0,00E+00	3,43E-04	8,89E-03	0,00E+00
Eutrophication, freshwater*	kg P eq	1,78E-04	0,00E+00	6,23E-07	0,00E+00	2,92E-05	2,08E-04	0,00E+00
Eutrophication, marine	kg N eq	7,29E-04	0,00E+00	1,67E-05	0,00E+00	1,19E-03	1,94E-03	0,00E+00
Eutrophication, terrestrial	mol N eq	6,86E-03	0,00E+00	1,83E-04	0,00E+00	1,33E-03	8,38E-03	0,00E+00
Photochemical ozone formation	kg NMVOC eq	2,10E-03	0,00E+00	4,46E-05	0,00E+00	4,72E-04	2,62E-03	0,00E+00
Resource use, minerals and metals	kg Sb eq	5,36E-06	0,00E+00	3,36E-08	0,00E+00	1,23E-07	5,52E-06	0,00E+00
Resource use, fossils	MJ	1,17E+01	0,00E+00	1,46E-01	0,00E+00	5,27E-01	1,24E+01	0,00E+00
Water use	m3 depriv.	5,44E-01	0,00E+00	4,38E-04	0,00E+00	3,07E-02	5,76E-01	0,00E+00
Particulate matter	disease inc.	3,74E-08	0,00E+00	6,91E-10	0,00E+00	9,22E-09	4,73E-08	0,00E+00
Ionising radiation	kBq U-235 eq	7,56E-02	0,00E+00	7,52E-04	0,00E+00	2,74E-03	7,91E-02	0,00E+00
Ecotoxicity, freshwater	CTUe	1,48E+01	0,00E+00	1,14E-01	0,00E+00	3,02E+01	4,51E+01	0,00E+00
Human toxicity, non-cancer	CTUh	8,80E-09	0,00E+00	1,19E-10	0,00E+00	4,79E-09	1,37E-08	0,00E+00
Human toxicity, cancer	CTUh	1,36E-09	0,00E+00	3,69E-12	0,00E+00	3,54E-10	1,71E-09	0,00E+00
Land use	Pt	1,93E+01	0,00E+00	1,04E-01	0,00E+00	6,24E-01	2,00E+01	0,00E+00

the results in kg PO₄ eq. are obtained by multiplying the results in kg P eq. with a factor of 3.07.

ECOCAP BASE AC 16 SCURO

TABLE 13: Breakdown of the results of the use of resources with reference to the declared unit in the investigated information modules.

PARAMETERS	UNIT OF MEASUREMENT	A1-A3	C1	C2	C3	C4	TOTAL	D
PERE	MJ	2,84E+00	0,00E+00	2,06E-03	0,00E+00	8,40E-01	3,68E+00	0,00E+00
PERM	MJ	8,24E-01	0,00E+00	0,00E+00	0,00E+00	-8,24E-01	0,00E+00	0,00E+00
PERT	MJ	3,66E+00	0,00E+00	2,06E-03	0,00E+00	1,68E-02	3,68E+00	0,00E+00
PENRE	MJ	9,43E+00	0,00E+00	1,46E-01	0,00E+00	2,78E+00	1,24E+01	0,00E+00
PENRM	MJ	2,25E+00	0,00E+00	0,00E+00	0,00E+00	-2,25E+00	0,00E+00	0,00E+00
PENRT	MJ	1,17E+01	0,00E+00	1,46E-01	0,00E+00	5,27E-01	1,24E+01	0,00E+00
SM	Kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	m³	1,05E-02	0,00E+00	1,52E-05	0,00E+00	7,49E-04	1,12E-02	0,00E+00

PERE = Use of renewable primary energy resources excluding primary renewable energy resources used as feedstocks; PERM = Use of renewable primary energy resources as feedstocks; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy resources excluding primary non-renewable energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources as raw materials; PENRT = Total use of non-renewable primary energy resources; SM = Use of secondary materials; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of fresh water.

ECOCAP BASE AC 16 SCURO

TABLE 14: Waste breakdown with reference to the declared unit in the investigated information modules.

PARAMETERS	UNIT OF MEASUREMENT	A1-A3	C1	C2	C3	C4	TOTAL	D
HWD	Kg	1,21E-05	0,00E+00	3,82E-07	0,00E+00	1,62E-06	1,41E-05	0,00E+00
NHWD	Kg	3,27E-01	0,00E+00	7,52E-03	0,00E+00	6,45E-01	9,79E-01	0,00E+00
RWD	Kg	3,32E-05	0,00E+00	9,89E-07	0,00E+00	2,66E-06	3,68E-05	0,00E+00

HWD = Hazardous Waste Disposed; NHWD = Non-Hazardous Waste Disposed; RWD = Radioactive Waste Disposed.

ECOCAP BASE AC 16 SCURO

TABLE 15: Breakdown of output streams with reference to the declared unit along the investigated information modules.

PARAMETERS	UNIT OF MEASUREMENT	A1-A3	C1	C2	C3	C4	TOTAL	D
CRU	Kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	Kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MER	Kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EET	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
CRU	Kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

CRU = Components for Reuse; MFR = Materials for Recycling; MER = Materials for Energy Recovery; EEE = Exported Electrical Energy; EET = Exported Thermal Energy.

ECOCAP BASE AC 16 INCOLORE

TABLE 16: Breakdown of impact assessment results by environmental performance indicators with reference to the declared unit in the investigated information modules.

IMPACT CATEGORY	UNITS	A1-A3	C1	C2	C3	C4	TOTAL	D
Climate change	kg CO ₂ eq	3,27E-01	0,00E+00	9,62E-03	0,00E+00	1,22E+00	1,55E+00	0,00E+00
Climate change - Fossil	kg CO ₂ eq	4,18E-01	0,00E+00	9,59E-03	0,00E+00	3,03E-01	7,30E-01	0,00E+00
Climate change - Biogenic	kg CO ₂ eq	-9,32E-02	0,00E+00	2,56E-05	0,00E+00	9,13E-01	8,20E-01	0,00E+00
Climate change - Land use and LU change	kg CO ₂ eq	1,73E-03	0,00E+00	3,80E-06	0,00E+00	2,41E-05	1,76E-03	0,00E+00
Ozone depletion	kg CFC11 eq	4,30E-08	0,00E+00	2,24E-09	0,00E+00	6,56E-09	5,18E-08	0,00E+00
Acidification	mol H+ eq	2,03E-03	0,00E+00	4,86E-05	0,00E+00	3,43E-04	2,42E-03	0,00E+00
Eutrophication, freshwater*	kg P eq	1,09E-04	0,00E+00	6,23E-07	0,00E+00	2,92E-05	1,38E-04	0,00E+00
Eutrophication, marine	kg N eq	4,40E-04	0,00E+00	1,67E-05	0,00E+00	1,19E-03	1,65E-03	0,00E+00
Eutrophication, terrestrial	mol N eq	4,52E-03	0,00E+00	1,83E-04	0,00E+00	1,33E-03	6,03E-03	0,00E+00
Photochemical ozone formation	kg NMVOC eq	1,19E-03	0,00E+00	4,46E-05	0,00E+00	4,72E-04	1,70E-03	0,00E+00
Resource use, minerals and metals	kg Sb eq	3,83E-06	0,00E+00	3,36E-08	0,00E+00	1,23E-07	3,99E-06	0,00E+00
Resource use, fossils	MJ	9,02E+00	0,00E+00	1,46E-01	0,00E+00	5,27E-01	9,69E+00	0,00E+00
Water use	m3 depriv.	1,80E-01	0,00E+00	4,38E-04	0,00E+00	3,07E-02	2,11E-01	0,00E+00
Particulate matter	disease inc.	1,67E-08	0,00E+00	6,91E-10	0,00E+00	9,22E-09	2,67E-08	0,00E+00
Ionising radiation	kBq U-235 eq	5,25E-02	0,00E+00	7,52E-04	0,00E+00	2,74E-03	5,60E-02	0,00E+00
Ecotoxicity, freshwater	CTUe	7,48E+00	0,00E+00	1,14E-01	0,00E+00	3,02E+01	3,78E+01	0,00E+00
Human toxicity, non-cancer	CTUh	5,47E-09	0,00E+00	1,19E-10	0,00E+00	4,79E-09	1,04E-08	0,00E+00
Human toxicity, cancer	CTUh	2,91E-10	0,00E+00	3,69E-12	0,00E+00	3,54E-10	6,49E-10	0,00E+00
Land use	Pt	9,15E+00	0,00E+00	1,04E-01	0,00E+00	6,24E-01	9,88E+00	0,00E+00

the results in kg PO₄ eq. are obtained by multiplying the results in kg P eq. with a factor of 3.07.

ECOCAP BASE AC 16 INCOLORE

TABLE 17: Breakdown of the results of the use of resources with reference to the declared unit in the investigated information modules.

PARAMETERS	UNIT OF MEASUREMENT	A1-A3	C1	C2	C3	C4	TOTAL	D
PERE	MJ	9,34E-01	0,00E+00	2,06E-03	0,00E+00	8,40E-01	1,78E+00	0,00E+00
PERM	MJ	8,24E-01	0,00E+00	0,00E+00	0,00E+00	-8,24E-01	0,00E+00	0,00E+00
PERT	MJ	1,76E+00	0,00E+00	2,06E-03	0,00E+00	1,68E-02	1,78E+00	0,00E+00
PENRE	MJ	6,76E+00	0,00E+00	1,46E-01	0,00E+00	2,78E+00	9,69E+00	0,00E+00
PENRM	MJ	2,25E+00	0,00E+00	0,00E+00	0,00E+00	-2,25E+00	0,00E+00	0,00E+00
PENRT	MJ	9,02E+00	0,00E+00	1,46E-01	0,00E+00	5,27E-01	9,69E+00	0,00E+00
SM	Kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	m³	5,28E-03	0,00E+00	1,52E-05	0,00E+00	7,49E-04	6,04E-03	0,00E+00

PERE = Use of renewable primary energy resources excluding primary renewable energy resources used as feedstocks; PERM = Use of renewable primary energy resources as feedstocks; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy resources excluding primary non-renewable energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources as raw materials; PENRT = Total use of non-renewable primary energy resources; SM = Use of secondary materials; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of fresh water.

ECOCAP BASE AC 16 INCOLORE

TABLE 18: Waste breakdown with reference to the declared unit in the investigated information modules.

PARAMETERS	UNIT OF MEASUREMENT	A1-A3	C1	C2	C3	C4	TOTAL	D
HWD	Kg	8,22E-06	0,00E+00	3,82E-07	0,00E+00	1,62E-06	1,02E-05	0,00E+00
NHWD	Kg	8,25E-02	0,00E+00	7,52E-03	0,00E+00	6,45E-01	7,35E-01	0,00E+00
RWD	Kg	2,83E-05	0,00E+00	9,89E-07	0,00E+00	2,66E-06	3,20E-05	0,00E+00

HWD = Hazardous Waste Disposed; NHWD = Non-Hazardous Waste Disposed; RWD = Radioactive Waste Disposed.

ECOCAP BASE AC 16 INCOLORE

TABLE 19: Breakdown of output streams with reference to the declared unit along the investigated information modules.

PARAMETERS	UNIT OF MEASUREMENT	A1-A3	C1	C2	C3	C4	TOTAL	D
CRU	Kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	Kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MER	Kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EET	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
CRU	Kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

CRU = Components for Reuse; MFR = Materials for Recycling; MER = Materials for Energy Recovery; EEE = Exported Electrical Energy; EET = Exported Thermal Energy.

ECOCAP BIANCO

TABLE 20: The indicator includes all greenhouse gases in the total GWP, but excludes the absorption and emissions of biogenic carbon dioxide and biogenic carbon stored in the product. This indicator is therefore equal to the GWP indicator originally defined in EN 15804: 2012 + A1: 2013.

		Results for 1 kg						
Potential environmental impacts – additional indicator	UNITS	A1-A3	C1	C2	C3	C4	TOTAL	D
GWP - GHG	Kg CO ₂ eq	1,07E+00	0,00E+00	9,58E-03	0,00E+00	6,54E-01	1,73E+00	0,00E+00

ECOCAP BASE AC16 PHC

TABLE 21: The indicator includes all greenhouse gases in the total GWP, but excludes the absorption and emissions of biogenic carbon dioxide and biogenic carbon stored in the product. This indicator is therefore equal to the GWP indicator originally defined in EN 15804: 2012 + A1: 2013.

		Results for 1 kg						
Potential environmental impacts – additional indicator	UNITS	A1-A3	C1	C2	C3	C4	TOTAL	D
GWP - GHG	Kg CO ₂ eq	1,07E+00	0,00E+00	9,58E-03	0,00E+00	6,54E-01	1,73E+00	0,00E+00

ECOCAP BASE AC 16 SCURO

TABLE 22: The indicator includes all greenhouse gases in the total GWP, but excludes the absorption and emissions of biogenic carbon dioxide and biogenic carbon stored in the product. This indicator is therefore equal to the GWP indicator originally defined in EN 15804: 2012 + A1: 2013.

		Results for 1 kg						
Potential environmental impacts – additional indicator	UNITS	A1-A3	C1	C2	C3	C4	TOTAL	D
GWP - GHG	Kg CO ₂ eq	6,39E-01	0,00E+00	9,58E-03	0,00E+00	6,54E-01	1,30E+00	0,00E+00

ECOCAP BASE AC 16 INCOLORE

TABLE 23: The indicator includes all greenhouse gases in the total GWP, but excludes the absorption and emissions of biogenic carbon dioxide and biogenic carbon stored in the product. This indicator is therefore equal to the GWP indicator originally defined in EN 15804: 2012 + A1: 2013.

		Results for 1 kg						
Potential environmental impacts – additional indicator	UNITS	A1-A3	C1	C2	C3	C4	TOTAL	D
GWP - GHG	Kg CO ₂ eq	4,23E-01	0,00E+00	9,58E-03	0,00E+00	6,54E-01	1,09E+00	0,00E+00

TABLE 24: Changes for the GWP-GHG indicator.

PRODUCT	GHG AVERAGE	COLOUR VARIANT	PERCENTAGE CHANGE FROM AVERAGE
ECOCAP BIANCO	1,46E+00	ECOCAP BIANCO	18%
		ECOCAP BASE AC16 PHC	18%
		ECOCAP BASE AC 16 SCURO	-11%
		ECOCAP BASE AC 16 INCOLORE	-26%

TABLE 25: Biogenic carbon content in the product and its packaging.

		C BIOGENIC	
		PRODUCT	PACKAGING: PALLET
ECOCAP (all colour variants)		NON SIGNIFICATIVO	8,63E-02

Note: 1 kg of biogenic carbon is equivalent to 44/12 kg CO₂.

5.

OTHER ENVIRONMENTAL INFORMATION

For the products under analysis CAP ARREGHINI S.p.A. declares that:

- *The required product information is transmitted downstream with the “safety data sheet”, where provided, or with the “information sheet”.*
- *Information on the possible presence of PBT or vPvB substances >0.1% w/w can be found in sections 2.3 and/or 12.5 of the safety data sheets.*
- *Information on possible restrictions of use (annex XVII), SVHC substances (Art. 59, Candidate List), can be found in section 15.1 of the Safety Data Sheets.*
- *The company has verified that the suppliers of raw materials have complied with their obligations under the REACH Regulation.*



6.

REFERENCES

PCR 2019:14: "Construction products" version 1.11

UNI EN 15804 - Sustainability of constructions - Environmental product declarations - Framework development rules per product category.

UNI EN ISO 14025:2010 - Environmental labels and declarations - Type III environmental declarations - Principles and procedures.

UNI EN ISO 14040:2021 - Environmental management - Life cycle assessment - Principles and framework.

UNI EN ISO 14044:2021 - Environmental management - Life cycle assessment - Requirements and guidelines.

GENERAL PROGRAMME INSTRUCTIONS FOR THE INTERNATIONAL EPD® SYSTEM VERSION 3.01 (2019-09-18)

Report LCA_CAP ARREGHINI_V1.1



7.

INFORMATION ABOUT THE COMPANY, THE CERTIFICATION BODY AND THE PROGRAMME

Programme:	<p>The International EPD® System</p> <p>EPD International AB Box 210 60 SE-100 31 Stockholm Sweden</p> <p>www.environdec.com info@environdec.com</p>
The ISO 21930 standard and the CEN EN 15804 standard serve as the main rules for the product category (PCR)	
Product category rules (PCR): PCR 2019:14: "Construction products" version 1.11	
The 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 committee can be contacted via www.environdec.com/contact .	
EPD REGISTRATION NUMBER: S-P-xxxxxx	
Independent third-party verification of declaration and data, according to ISO 14025 <input checked="" type="checkbox"/> External <input checked="" type="checkbox"/> Internal <input type="checkbox"/> EPD process certification <input checked="" type="checkbox"/> EPD verification	
Third party verifier: < DNV GL - Business Assurance > 	
Procedure for follow-up of data during EPD validity involves third party verifier: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

The EPD owner has sole ownership of and responsibility for the EPD. EPDs within the same product category but from different programmes may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804.

7.

INFORMATION ABOUT THE COMPANY, THE CERTIFICATION BODY AND THE PROGRAMME

EPD owner	CAP Arreghini Spa		https://www.caparreghini.it/
Technical Support	Document developed by QualityNet srl		http://qualitynet.it/
	With the collaboration of EcamRicert Srl		https://ecamricert.com/

CAP ARREGHINI SpA

ITALIAN PAINTS SINCE 1950
V.le Pordenone, 80 - 30026 PORTOGRUARO (VE)
Tel. +39 0421 278111 - Fax +39 0421 278115
info@caparreghini.it - www.caparreghini.it
Azienda con Sistema Certificato
UNI EN ISO 9001 - UNI EN ISO 14001