

Environmental Product Declaration



CEMENT SCREEDS WITH A SEMI-MOIST CONSISTENCY



MIXCEM PRONTO
MIXCEM PRONTO – BULK
SF 300
SF 300 – BULK
SF 400
SF 400 – BULK
BINDER FOR SCREEDS



FORNACI CALCE GRIGOLIN S.P.A.

PRODUCTION SITE
Z.I, Loc. Piombinara
00034 Colleferro RM
Via Ex Bombardieri, 14,
31010 Ponte Della Priula (TV)

According ISO 14025:2010 and EN 15804:2012+ A2:2019/AC:2021

Program Operator	EPDItaly
Publisher	EPDItaly
Declaration number	EPD_PR-02-06-MSCI_2023_rev.1.0
Registration number	EPDITALY1331
Publication date	25/06/2026
Expiry date	25/06/2031

GENERAL INFORMATION

EPD OWNER

Company name	Fornaci Calce Grigolin S.p.A.
Legal office	Via Bombardieri 14, Ponte della Priula (TV)
Contacts for information about the EPD	c.fregolent@fornacigrigolin.it
Company website	www.fornacigrigolin.it

PROGRAM OPERATOR

EPDItaly	EPDItaly - Via Gaetano De Castilia n° 10 - 20124 Milano, Italy
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INFORMATION ABOUT THE EPD

Product name	- MIXCEM PRONTO - MIXCEM PRONTO – BULK - SF 300 - SF 300 – BULK - SF 400 - SF 400 – BULK - BINDER FOR SCREEDS
Production site	- MIXCEM PRONTO - MIXCEM PRONTO – BULK - SF 300 - SF 400 - SF 400 – BULK - BINDER FOR SCREEDS Z.I, Loc. Piombinara, 00034 Colleferro (RM) - SF 300 – BULK Via Ex Bombardieri, 14, 31010 Ponte Della Priula (TV)
Scope of the product	Premixed materials
EPD type	Specific product EPD based on a qualified tool
Product range	TRADITIONAL SCREEDS

SUMMARY DESCRIPTION AND TECHNICAL INFORMATION OF THE PRODUCTS

MIXCEM PRONTO	Ready-to-use, normal-setting, fast-drying, semi-dry cementitious screed, ideal for creating substrates for indoor and outdoor flooring.
MIXCEM PRONTO – BULK	
SF 300	Ready-to-use traditional semi-dry cementitious screed for indoor and outdoor use, with a maximum aggregate size of 3 mm.
SF 300 – BULK	
SF 400	Ready-to-use traditional semi-dry cementitious screed for indoor and outdoor use, with a maximum aggregate size of 4 mm.
SF 400 – BULK	
BINDER FOR SCREEDS	Hydraulic binder for producing lightweight subfloors used as a technical infill layer beneath the screed.

PRODUCTS REFERENCE TECHNICAL STANDARDS

MIXCEM PRONTO	
MIXCEM PRONTO – BULK	
SF 300	EN 13813:2004
SF 300 – BULK	Screed material and floor screeds - Screed material - Properties and requirements
SF 400	
SF 400 – BULK	
BINDER FOR SCREEDS	
CPC Code (number)	37560
Reference PCR	PCR ICMQ-001/15 rev. 3.2 Prodotti e servizi per l'edilizia, EPDItaly. Published on: 03/11/2025.
Declared Unit	1000 kg
Reference year	2023
EPD type	Specific product EPD based on a qualified tool
LCA Tool identification	Fornaci Calce Grigolin S.p.A. - LCA TOOL n.1_Rev.4, developed using SimaPro 10.2.0.2 and Ecoinvent 3.11
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TECHNICAL SUPPORT:	Greenwich S.r.l. - Tel. +39 035 4948794 Operations office: Via Presolana 2/4, 24030 Medolago (BG) Italy Registered office: Via Vittorio Emanuele II 179, 24033 Calusco d'Adda (BG) Italy tecnicog4@greenwichsrl.it info@greenwichsrl.it

INFORMATION ABOUT THE ASSESSMENT

PCR	PCR ICMQ-001/15 rev. 3.2 Prodotti e servizi per l'edilizia, EPDItaly. Published on: 03/11/2025.
EPDItaly Regulations	Regulation EPDITALY v. 6.0 published on 30/10/2023
Project Report LCA	LCA Report _Analisi del ciclo di vita di premiscelati, cementi e leganti plastici, pitture e tonachini Novembre 2025_rev.05
Verification Statement / Independent Validation	PCR revision was performed by the EPDItaly Technical Committee – info@epditaly.it Independent verification of the declaration and the data was performed according to ISO 14025:2010. ☐ Internal ☒ External Third party verification/validation done by: ICMQ S.p.A., via Gaetano De Castillia n° 10 - 20124 Milano, Italy. Accredited by Accredia.
Comparability Statement	Environmental declarations published within the same product category, but from different programmes may not be comparable. In particular, EPDItaly declarations on construction products may not be comparable if not compliant to EN 15804:2012+A2:2019.
Responsibility Statement	The EPD Owner indemnifies EPDItaly from any non-compliance with environmental legislation. The declaration holder will be responsible for the supporting information and evidence. EPDItaly declines all responsibility for the information, data and results provided by the EPD Owner for the life cycle assessment.
Reference documents	This declaration was developed in compliance to the EPDItaly Regulations rev. 6.0 published on 30/10/2023 and available at www.epditaly.it .

GENERAL INFORMATION

IDENTITY – FORNACI CALCE GRIGOLIN SPA

The Grigolin Group comprises a range of specialized companies operating across all sectors of the building and construction industry, offering integrated, next-generation solutions for production technologies. The Group places particular emphasis on environmental sustainability, the development of human resources, and product quality, thanks in part to the seamless synergy achieved through the integrated management of raw materials, resources, technologies, and professionals, enabling it to meet the needs of a constantly evolving market.

Since 1963, Fornaci Calce Grigolin has been one of the most important Italian and international companies in the construction materials and technologies sector. It boasts over sixty years of experience, gained on construction sites and in research and development laboratories, and looks to the future with a view to continuous evolution, improving product quality, and implementing support services provided by qualified personnel.

Geographical expansion, technological innovation and the presence of highly qualified personnel have allowed Fornaci Calce Grigolin to become an industry leader and express its value through:

- large systems of synergies;
- diversification and verticalization of production sectors;
- technological development and applied research;
- continuous attention to environmental values.

Today, Fornaci Calce Grigolin is one of the most important Italian and international companies in the construction materials and technologies sector. It boasts a full range of special solutions: lime and derivatives, thermal insulation, underlays and installation of floors and coverings, renovations, green building, decorations, paintings and finishes, deep foundations and consolidations, binders, mortars and plasters.

The company has always paid attention to the environment by minimizing emissions from resource extraction, transportation, and their processing. Furthermore, the lime production process is automated and emissions controls are carried out with continuous monitoring by the relevant authorities, with EPDItaly certification recognized in 2024.



SCOPE AND TYPE OF EPD

 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
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
✓	✓	✓	ND	ND	ND	ND	ND	ND	ND	ND	ND	✓	✓	✓	✓	✓

GEOGRAPHIC VALIDITY FOR PRODUCT STAGE A1-A3	Europe & ITALY
GEOGRAPHIC VALIDITY FOR END OF LIFE C1-C4, D	ITALY
GEOGRAPHIC VALIDITY FOR PRODUCTION SITE	ITALY
EPD TYPE	Product specific EPD based on a qualified tool. From cradle to gate with modules C1-C4 and module D (A1-A3+C1-C4+D)
REFERENCE YEAR	2023
DATABASE	Ecoinvent 3.11
SOFTWARE	The EPD was generated with the LCA-Tool: Fornaci Calce Grigolin S.p.A. - LCA TOOL n.1_Rev.4 Such LCA-Tool was developed using SimaPro 10.2.0.2 and Ecoinvent 3.11

DETAILED PRODUCT DESCRIPTION

CEMENT SCREEDS WITH A SEMI-MOIST CONSISTENCY



MIXCEM PRONTO	Semi-dry cementitious screed with controlled hydraulic shrinkage, normal setting and fast drying. MIXCEM PRONTO offers excellent workability and ease of application and enables perfectly level, stable and compact substrates with high mechanical performance and low residual moisture to be obtained, thereby reducing waiting times before installing subsequent floor coverings. MIXCEM PRONTO dries rapidly and
MIXCEM PRONTO – BULK	guarantees a moisture content of $\leq 2\%$ after 7 days, allowing wood, resilient flooring, natural stone or composite materials to be safely installed within a short time. MIXCEM PRONTO can be applied in thicknesses ranging from a minimum of 2 cm to a maximum of 12 cm. Its semi-dry consistency makes it possible to create perfectly horizontal surfaces or surfaces with different slopes. MIXCEM PRONTO complies with EN 13813 as a CT-C30-F6 cementitious screed.
SF 300	SF 300 is a traditional semi-dry cementitious screed formulated with selected sands having a maximum particle size of 3 mm and a controlled grading curve. SF 300 enables perfectly level, stable and compact substrates with suitable mechanical performance to be obtained. It is intended for screeds with thicknesses ranging from a minimum of 3 cm to a maximum of 12 cm. Its semi-dry consistency makes it possible to create perfectly horizontal surfaces or surfaces with different slopes. SF 300 complies with EN 13813 as a CT-C20-F5 cementitious screed.
SF 300 – BULK	
SF 400	SF 400 is a traditional semi-dry cementitious screed formulated with selected sands having a maximum particle size of 4 mm and a controlled grading curve. SF 400 enables perfectly level, stable and compact substrates with suitable mechanical performance to be obtained. It is intended for screeds with thicknesses ranging from a minimum of 4 cm to a maximum of 12 cm. Its semi-dry consistency makes it possible to create perfectly horizontal surfaces or surfaces with different slopes. SF 400 complies with EN 13813 as a CT-C20-F5 cementitious screed.
SF 400 – BULK	
BINDER FOR SCREEDS	BINDER FOR SCREEDS is a hydraulic binder mixed with a specific air-entraining admixture and water to produce a lightweight cellular cement with a semi-fluid consistency. The product is used to create lightweight subfloors serving as a technical infill layer that embeds services and pipework and forms a highly level surface on which the final screed, with suitable mechanical strength for the installation of flooring, can be laid.

FIELDS OF USE

MIXCEM PRONTO

MIXCEM PRONTO is a normal-setting, fast-drying screed for creating indoor and outdoor substrates for ceramic, wood, stone and resilient flooring. It is suitable for screeds incorporating radiant heating and cooling systems, terraces, balconies, flat roofs, roof terraces, tanks, swimming pools, laboratories and plant rooms. Depending on the required thickness and the type of flooring, MIXCEM PRONTO may be installed as a bonded screed, adhered directly to the substrate; as an unbonded screed, separated from the substrate by a vapour barrier; or as a floating screed when laid over an insulating layer. The mix may be prepared using a drum mixer, planetary mixer, automatic screw mixer or pneumatic screed pump, to form thicknesses ranging from a minimum of 2 cm (bonded screed) to a maximum of 12 cm. The product is levelled with a metal straightedge and then finished with a hand float or power trowel to obtain a closed, compact and durable surface. MIXCEM PRONTO is suitable for the installation, using cementitious, dispersion or reactive adhesives, of ceramic tiles, single-fired tiles, double-fired tiles, majolica, terracotta, stoneware, porcelain stoneware, marble-effect stoneware, clinker, natural stone, marble, reconstructed stone, cement tiles, resilient flooring, carpet, wood, microcement, epoxy resins and polyurethane finishes.

MIXCEM PRONTO – BULK

SF 300

SF 300 is a semi-dry screed for creating indoor and outdoor substrates for ceramic, wood, stone and resilient flooring. It is suitable for screeds on terraces, balconies, flat roofs, roof terraces, laboratories and plant rooms. Depending on the required thickness and the type of flooring, SF 300 may be installed as a bonded screed, adhered directly to the substrate; as an unbonded screed, separated from the substrate by a vapour barrier; or as a floating screed when laid over an insulating layer. The mix may be prepared using a drum mixer, planetary mixer, automatic screw mixer or pneumatic screed pump, to form thicknesses ranging from a minimum of 3 cm (bonded screed) to a maximum of 12 cm. The product is levelled with a metal straightedge and then finished with a hand float or power trowel to obtain a closed, compact and durable surface. SF 300 is suitable for the installation, using cementitious, dispersion or reactive adhesives, of ceramic tiles, single-fired tiles, double-fired tiles, majolica, terracotta, stoneware, porcelain stoneware, marble-effect stoneware, clinker, natural stone, marble, reconstructed stone, cement tiles, resilient flooring, carpet and wood.

SF 300 – BULK

SF 400

SF 400 is a semi-dry screed for creating indoor and outdoor substrates for ceramic, wood, stone and resilient flooring. It is suitable for screeds on terraces, balconies, flat roofs, roof terraces, laboratories and plant rooms. Depending on the required thickness and the type of flooring, SF 400 may be installed as a bonded screed, adhered directly to the substrate; as an unbonded screed, separated from the substrate by a vapour barrier; or as a floating screed when laid over an insulating layer. The mix may be prepared using a drum mixer, planetary mixer, automatic screw mixer or pneumatic screed pump, to form thicknesses ranging from a minimum of 3 cm (bonded screed) to a maximum of 12 cm. The product is levelled with a metal straightedge and then finished with a hand float or power trowel to obtain a closed, compact and durable surface. SF 400 is suitable for the installation, using cementitious, dispersion or reactive adhesives, of ceramic tiles, single-fired tiles, double-fired tiles, majolica, terracotta, stoneware, porcelain

SF 400 – BULK

stoneware, marble-effect stoneware, clinker, natural stone, marble, reconstructed stone, cement tiles, resilient flooring, carpet and wood.

BINDER FOR SCREEDS

BINDER FOR SCREEDS is a hydraulic binder for producing lightweight subfloors that serve as a technical infill layer, embedding services and pipework and bringing the surface to the required level for the installation of insulating panels, underfloor heating and cooling systems, or a final screed with suitable mechanical strength to receive ceramic tiles, stone, wood or resilient flooring.

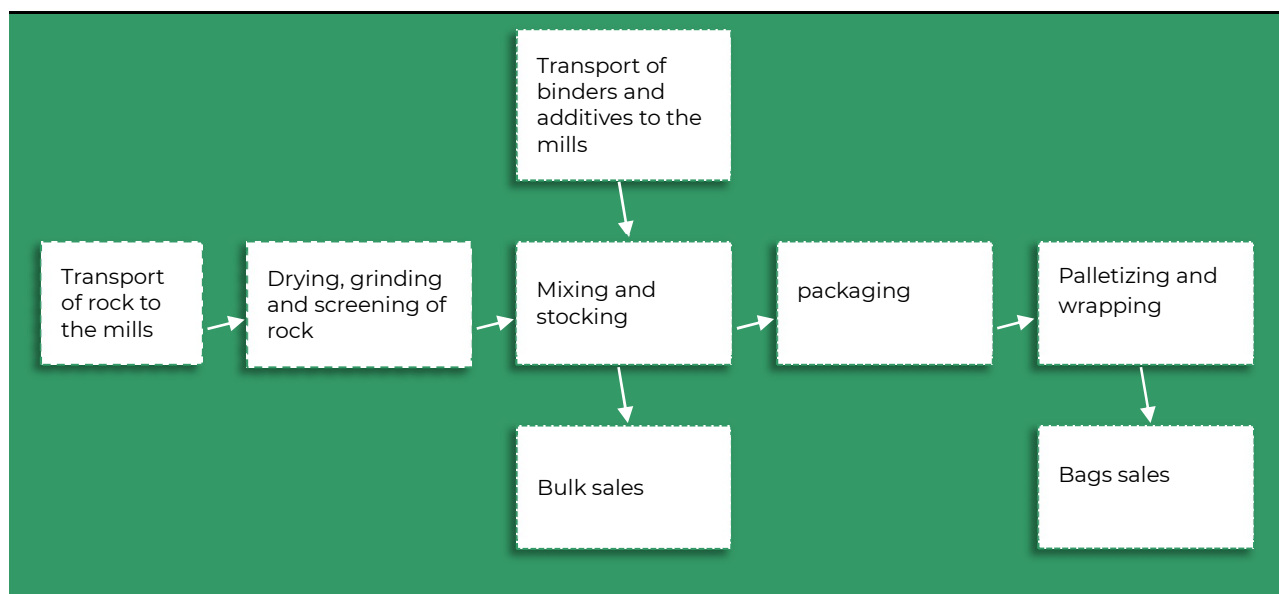
BINDER FOR SCREEDS may also be used as a lightweight infill pour on flat roofs and terraces beneath the screed. It is particularly suitable for producing subfloors prior to the installation of underfloor heating and cooling systems, as it provides excellent surface flatness, which is essential for the correct installation of radiant-system panels.

DESCRIPTION OF THE MANUFACTURING PROCESS

The production process for the premixed products under study consists of the following stages:

1. Transport of rock to the mills;
2. Drying, grinding, and screening of rock;
3. Mixing of rock, binders and additives, and storage of the premix;
4. Packaging;
5. Palletizing and wrapping.

The ground limestone, sorted by particle size, is conveyed to the storage silo via elevators located downstream of the grinding and screening process. The semi-finished products, which may be further sorted by particle size, are fed into dedicated silos. The plant is fully automated and operates in a closed-loop system. The production of premixed products involves mixing the raw materials, which are weighed according to the formulation and blended in a mixer. After the mixing process, the finished product can be sent to the bagging line, to bulk storage silos, or loaded directly into a tanker. A portion of the mixed product is stored in silos to meet various bulk requests from customers. Most of the finished product is bagged using a bagging machine and subsequently palletized.



PRODUCT COMPOSITION (excluding packaging)

Material	Min [kg]	Max [kg]
Aggregates	4,00E+02	9,00E+02
Binders	1,00E+02	6,00E+02
Additives	0,00E+00	1,66E+00

PACKAGING COMPOSITION

Material	Min [kg]	Max [kg]
Wood	0,00E+00	1,77E+01
Cardboard	0,00E+00	3,12E+00
Polyethylene	0,00E+00	1,15E-01
Total	0,00E+00	2,09E+01

CALCULATION RULES

DECLARED UNIT	1000 kg
ASSUMPTIONS	No assumptions have been done
CUT-OFF RULES	No cut-off contributions have been considered
LCA METHOD	Cut-off by classification
CHARACTERISATION FACTORS	EF 3.1
EMPLOYEE COMMUTING	• Staff movements; • Production of capital goods and buildings.
DATA QUALITY	UPSTREAM phase: • Site-specific data regarding weight, quantity, raw materials, raw materials packaging, raw materials transportation, electrical and thermal energy. CORE phase: • Site-specific data regarding auxiliary materials, emissions to the atmosphere, internal transport, waste transport and treatment.
ALLOCATION	The allocation of input and output flows to the studied system was carried out on a mass basis considering the entire production of the plant.
GENERIC DATA	Criteria of geographical equivalence, technological equivalence, and equivalence with respect to system boundaries.

SCENARIOS AND OTHER TECHNICAL INFORMATION

INCLUDED PROCESSES A1-A3	The UPSTREAM phase (A1) includes: - the extraction and transformation of raw materials into a raw material, not yet definable as a finished product, including the packaging used for the individual materials; - the generation and supply of energy required for the extraction and refining of the raw material; - the generation of energy used for the production of the finished product; specific electricity mix: 0,683 kg CO2 eq/kWh; - the production of waste resulting from these processes. The CORE phase (A2 and A3) includes: - external and internal transportation; - product manufacturing; - production of auxiliary materials required to obtain the finished product; - production of the finished product packaging; - waste management related to the production process.			
END OF LIFE SCENARIO C1-C4, D	The construction and demolition waste scenario from Eionet (European Environment Information and Observation Network) was used: “Construction and Demolition Waste: challenges and opportunities in a circular economy” (2020).			
	Phase	Scenario	Modelling	
	C1	Dismantling	Diesel consumption, 0,044 MJ/kg product	
	C2	Waste transport	kg product per 100 km	
	Phase	Scenario	Concrete	Phase
	C3	Recycling [%]	95,00%	C3
		Energy recovery [%]	0,00%	0,00%
C4	Landfill [%]	5,00%	C4	

ENVIRONMENTAL IMPACT INDICATORS

Impact categories

GWP	Potential global warming at 100 years	GWP – Global Warming Potential GWP quantifies the contribution of a greenhouse gas (e.g., CH ₄ , N ₂ O, CFCs, etc.) to the greenhouse effect relative to that of CO ₂ , which has a reference potential of 1. The ultimate goal is to estimate the impacts caused by the rise in average temperature on humans, ecosystems, and materials. The method for characterizing the impacts of greenhouse gases is based on the EF 3.1 method, which uses kilograms of CO ₂ equivalent over a 100-year time horizon as the impact indicator.
GWP-fossil	Potential global warming at 100 years - Fossil	
GWP-biogenic	Potential global warming at 100 years - Biogenic	
GWP-land use	Potential global warming at 100 years – soil use and change in soil use	
ODP	Potential for depletion of the stratospheric ozone layer	Ozone Layer Depletion Ozone is a gas found in the stratosphere that protects the Earth from the ultraviolet rays emitted by the sun. The depletion of the ozone layer caused by unstable compounds (such as CFCs, HCFCs, etc.) allows more UV rays to reach the Earth's surface, resulting in adverse effects on humans, ecosystems, and materials. The method for characterizing these impacts is based on the guidelines of the World Meteorological Organization (WMO), which uses kilograms of CFC-11 equivalent (ODP, Ozone Depletion Potential—based on a relative scale that compares the gas in question to CFC-11) as an impact indicator.
AP	Potential for soil and water acidification	Soil acidification The acidification indicator is linked to atmospheric emissions of specific acidifying substances that cause changes in the pH of rain, soil, and water. The method for characterizing the impacts of acidification is based on the findings of the Centre for Environmental Sciences in Leiden, NL (CML), which uses kilograms of SO ₂ equivalent (AP, Acidification Potential—based on a relative scale that compares the substance in question with an equal mass of SO ₂ equivalent) as an impact indicator.
EP-freshwater	Eutrophication potential, freshwater	Water Eutrophication This refers to a condition of excessive nitrate and phosphate levels in an aquatic environment, which leads to the proliferation of microscopic algae and increased bacterial activity; the resulting decrease in oxygen levels in the water and soil causes environmental degradation with serious impacts on ecosystems. The method for characterizing the impacts of eutrophication is based on the findings of the Centre for Environmental Sciences in Leiden, NL (CML), which uses kilograms of phosphorus equivalent (EP, Eutrophication Potential—based on a relative scale that compares the substance in question with an equal mass of P) as an impact indicator.
EP-marine	Eutrophication potential, saltwater	
EP-terrestrial	Eutrophication potential, terrestrial	
POCP	Photochemical formation of ozone	Formation of photochemical oxidants This phenomenon results from the reaction of unburned hydrocarbons and nitrogen oxides present in exhaust fumes when exposed to solar radiation, leading to the formation of ozone, which is harmful to health. The method for characterizing the impacts of photochemical smog is based on the guidelines established by the United Nations Economic Commission for Europe (UNECE), which uses kilograms of C ₂ H ₄ -equivalent POCP (Photochemical Ozone Creation Potential—based on a relative scale that compares the substance in question with an equal mass of C ₂ H ₄ -equivalent POCP) as an impact indicator.
ADPF	Potential depletion of fossil abiotic resources	ADP – Abiotic Depletion
ADPE	Potential depletion of non-fossil abiotic resources	
Water Use	Water use	Water Use

LCA RESULTS

IMPACT CATEGORY INDICATORS

	MIXCEM PRONTO MIXCEM PRONTO – BULK
	SF 300 SF 300 – BULK
	SF 400 SF 400 – BULK
	BINDER FOR SCREEDS

MIXCEM PRONTO Colleferro

Results by Declared Unit: 1000 kg

Indicator	Unit	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
GWP-fossil	kg CO ₂ eq.	1,05E+02	4,35E+00	7,79E+00	1,18E+02	4,43E+00	1,90E+01	1,79E+01	1,13E+00	-4,95E+00
GWP-biogenic	kg CO ₂ eq.	1,57E+00	2,90E-03	-1,57E+00	1,00E-03	8,98E-04	1,30E-02	6,01E-02	1,30E-03	-1,43E-01
GWP-luluc	kg CO ₂ eq.	1,57E-02	1,39E-03	4,60E-02	6,30E-02	4,53E-04	6,30E-03	6,82E-03	2,38E-03	-2,21E-03
GWP-total	kg CO ₂ eq.	1,07E+02	4,35E+00	6,26E+00	1,18E+02	4,43E+00	1,90E+01	1,80E+01	1,14E+00	-5,08E+00
ODP	kg CFC 11 eq.	7,70E-07	9,50E-08	2,13E-07	1,08E-06	6,60E-08	4,15E-07	3,73E-07	2,12E-08	-7,13E-08
AP	mol H ⁺ eq.	2,99E-01	1,50E-02	3,05E-02	3,45E-01	3,96E-02	6,11E-02	1,46E-01	6,90E-03	-3,33E-02
EP-freshwater	kg P eq.	1,36E-02	2,87E-04	3,68E-03	1,75E-02	1,43E-04	1,30E-03	8,10E-03	1,01E-04	-1,26E-03
EP-marine	kg N eq.	8,31E-02	5,25E-03	1,07E-02	9,91E-02	1,84E-02	2,06E-02	5,54E-02	2,79E-03	-8,84E-03
EP-terrestrial	mol N eq.	9,85E-01	5,72E-02	1,00E-01	1,14E+00	2,02E-01	2,24E-01	6,01E-01	3,03E-02	-1,14E-01
POCP	kg NMVOC eq.	2,93E-01	2,27E-02	3,75E-02	3,53E-01	6,04E-02	9,26E-02	1,92E-01	1,02E-02	-3,17E-02
ADP-minerals&metals [1]	kg Sb eq.	2,04E-02	1,41E-05	2,67E-05	2,05E-02	1,58E-06	6,41E-05	3,99E-05	2,47E-06	-5,14E-05
ADP-fossil [1]	MJ	2,50E+02	4,69E+00	3,02E+01	2,85E+02	2,24E+00	2,12E+01	3,48E+01	1,65E+00	-1,90E+01
WDP [1]	m ³ world eq deprived	1,18E+01	2,32E-01	4,54E+00	1,66E+01	1,23E-01	1,05E+00	-4,78E+01	3,83E-01	-1,42E+01
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption									

Indicator	Unit	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
PERE	MJ	3,88E+01	9,75E-01	1,09E+02	1,49E+02	3,63E-01	4,41E+00	1,06E+01	1,32E+02	-9,94E+00
PERM	MJ	0,00E+00	0,00E+00	1,32E+02	1,32E+02	0,00E+00	0,00E+00	0,00E+00	-1,32E+02	0,00E+00
PERT	MJ	3,88E+01	9,75E-01	2,40E+02	2,80E+02	3,63E-01	4,41E+00	1,06E+01	2,32E-01	-9,94E+00
PENRE	MJ	2,11E+02	4,69E+00	0,00E+00	2,15E+02	2,24E+00	2,12E+01	3,48E+01	8,75E+01	-1,90E+01
PENRM	MJ	3,91E+01	0,00E+00	4,67E+01	8,59E+01	0,00E+00	0,00E+00	0,00E+00	-8,59E+01	0,00E+00
PENRT	MJ	2,50E+02	4,69E+00	4,67E+01	3,01E+02	2,24E+00	2,12E+01	3,48E+01	1,65E+00	-1,90E+01
SM	kg	0,00E+00	0,00E+00	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	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	0,00E+00	0,00E+00
FW	m ³	3,26E-01	7,42E-03	1,22E-01	4,55E-01	4,04E-03	3,35E-02	-1,02E+00	9,45E-03	-3,23E-01
Acronyms	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 re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water									

Indicator	indicato roi	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
HWD	kg	6,57E-02	1,33E-02	2,26E-02	1,02E-01	5,40E-04	6,81E-03	4,34E-02	3,84E-04	-2,39E-02
NHWD	kg	2,91E+00	2,48E+01	1,83E+00	2,96E+01	3,89E-02	1,29E+01	3,85E+02	5,05E+01	-9,08E-01
RWD	kg	5,66E-04	1,54E-04	1,94E-04	9,14E-04	6,03E-06	7,93E-05	2,50E-04	3,20E-06	-7,18E-05
CRU	kg	0,00E+00	0,00E+00	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	9,50E+02	0,00E+00	0,00E+00
MER	kg	0,00E+00	0,00E+00	8,73E-01	8,73E-01	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	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	0,00E+00	0,00E+00
Acronyms	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 energy, electricity; EET = Exported energy, thermal									
Disclaimer	[1] ADPF, ADPE, Water Use: the results of these environmental impact indicators must be used carefully as the uncertainties of these results are high or as there is limited experience with such indicators									

Biogenic carbon	Unit	Value
in the final product	kg C	0,00E+00
in the final product packaging	kg C	1,72E+00

MIXCEM PRONTO – BULK Colleferro

Results by Declared Unit: 1000 kg

Indicator	Unit	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
GWP-fossil	kg CO2 eq	1,03E+02	4,30E+00	2,14E+00	1,09E+02	4,43E+00	1,90E+01	1,79E+01	1,13E+00	-4,95E+00
GWP-biogenic	kg CO2 eq	1,58E+00	2,87E-03	6,39E-03	1,59E+00	8,98E-04	1,30E-02	6,01E-02	1,30E-03	-1,43E-01
GWP-luluc	kg CO2 eq	1,45E-02	1,38E-03	3,45E-06	1,59E-02	4,53E-04	6,30E-03	6,82E-03	2,38E-03	-2,21E-03
GWP-total	kg CO2 eq	1,04E+02	4,31E+00	2,15E+00	1,11E+02	4,43E+00	1,90E+01	1,80E+01	1,14E+00	-5,08E+00
ODP	kg CFC 11 eq	7,10E-07	9,40E-08	2,47E-10	8,04E-07	6,60E-08	4,15E-07	3,73E-07	2,12E-08	-7,13E-08
AP	mol H+ eq	2,84E-01	1,48E-02	5,76E-04	3,00E-01	3,96E-02	6,11E-02	1,46E-01	6,90E-03	-3,33E-02
EP-freshwater	kg P eq	1,26E-02	2,84E-04	3,03E-06	1,29E-02	1,43E-04	1,30E-03	8,10E-03	1,01E-04	-1,26E-03
EP-marine	kg N eq	7,96E-02	5,20E-03	3,23E-04	8,52E-02	1,84E-02	2,06E-02	5,54E-02	2,79E-03	-8,84E-03
EP-terrestrial	mol N eq	9,41E-01	5,66E-02	3,16E-03	1,00E+00	2,02E-01	2,24E-01	6,01E-01	3,03E-02	-1,14E-01
POCP	kg NMVOC eq	2,81E-01	2,25E-02	9,22E-04	3,04E-01	6,04E-02	9,26E-02	1,92E-01	1,02E-02	-3,17E-02
ADP-minerals&metals [1]	kg Sb eq	1,29E-04	1,40E-05	3,31E-08	1,43E-04	1,58E-06	6,41E-05	3,99E-05	2,47E-06	-5,14E-05
ADP-fossil [1]	MJ	2,35E+02	4,64E+00	1,72E-02	2,40E+02	2,24E+00	2,12E+01	3,48E+01	1,65E+00	-1,90E+01
WDP [1]	m³ world eq deprived	1,13E+01	2,29E-01	1,31E-03	1,15E+01	1,23E-01	1,05E+00	-4,78E+01	3,83E-01	-1,42E+01

Acronyms

GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption

Indicator	Unit	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
PERE	MJ	3,69E+01	9,64E-01	4,46E-03	3,79E+01	3,63E-01	4,41E+00	1,06E+01	2,32E-01	-9,94E+00
PERM	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	3,69E+01	9,64E-01	4,46E-03	3,79E+01	3,63E-01	4,41E+00	1,06E+01	2,32E-01	-9,94E+00
PENRE	MJ	2,02E+02	4,64E+00	1,72E-02	2,06E+02	2,24E+00	2,12E+01	3,48E+01	3,50E+01	-1,90E+01
PENRM	MJ	3,33E+01	0,00E+00	0,00E+00	3,33E+01	0,00E+00	0,00E+00	0,00E+00	-3,33E+01	0,00E+00
PENRT	MJ	2,35E+02	4,64E+00	1,72E-02	2,40E+02	2,24E+00	2,12E+01	3,48E+01	1,65E+00	-1,90E+01
SM	kg	0,00E+00	0,00E+00	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	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	0,00E+00	0,00E+00
FW	m³	3,12E-01	7,34E-03	4,00E-05	3,19E-01	4,04E-03	3,35E-02	-1,02E+00	9,45E-03	-3,23E-01

Acronyms

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 re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water

Indicator	Unit	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
HWD	kg	1,27E-02	1,50E-03	2,21E-04	1,44E-02	5,40E-04	6,81E-03	4,34E-02	3,84E-04	-2,40E-02
NHWD	kg	8,20E+00	2,81E+00	1,11E-02	1,10E+01	3,89E-02	1,29E+01	3,85E+02	5,05E+01	-9,12E-01
RWD	kg	7,39E-04	1,74E-05	1,07E-07	7,56E-04	6,03E-06	7,93E-05	2,50E-04	3,20E-06	-7,21E-05
CRU	kg	0,00E+00	0,00E+00	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	7,54E-02	7,54E-02	0,00E+00	0,00E+00	9,50E+02	0,00E+00	0,00E+00
MER	kg	0,00E+00	0,00E+00	1,04E-02	1,04E-02	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	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	0,00E+00	0,00E+00
Acronyms	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 energy, electricity; EET = Exported energy, thermal									
Disclaimer	[1] ADPF, ADPE, Water Use: the results of these environmental impact indicators must be used carefully as the uncertainties of these results are high or as there is limited experience with such indicators									

Biogenic carbon	Unit	Value
in the final product	kg C	0,00E+00
in the final product packaging	kg C	0,00E+00

SF 300 Colleferro

Results by Declared Unit: 1000 kg

Indicator	Unit	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
GWP-fossil	kg CO2 eq	1,02E+02	7,46E+00	7,79E+00	1,17E+02	4,43E+00	1,90E+01	1,79E+01	1,13E+00	-4,95E+00
GWP-biogenic	kg CO2 eq	1,47E+00	5,03E-03	-1,48E+00	1,00E-03	8,98E-04	1,30E-02	6,01E-02	1,30E-03	-1,43E-01
GWP-luluc	kg CO2 eq	1,37E-02	2,42E-03	4,60E-02	6,21E-02	4,53E-04	6,30E-03	6,82E-03	2,38E-03	-2,21E-03
GWP-total	kg CO2 eq	1,03E+02	7,46E+00	6,35E+00	1,17E+02	4,43E+00	1,90E+01	1,80E+01	1,14E+00	-5,08E+00
ODP	kg CFC 11 eq	7,15E-07	1,63E-07	2,13E-07	1,09E-06	6,60E-08	4,15E-07	3,73E-07	2,12E-08	-7,13E-08
AP	mol H+ eq	2,70E-01	2,50E-02	3,05E-02	3,25E-01	3,96E-02	6,11E-02	1,46E-01	6,90E-03	-3,33E-02
EP-freshwater	kg P eq	1,21E-02	4,99E-04	3,68E-03	1,63E-02	1,43E-04	1,30E-03	8,10E-03	1,01E-04	-1,26E-03
EP-marine	kg N eq	7,87E-02	8,61E-03	1,07E-02	9,81E-02	1,84E-02	2,06E-02	5,54E-02	2,79E-03	-8,84E-03
EP-terrestrial	mol N eq	9,38E-01	9,37E-02	1,00E-01	1,13E+00	2,02E-01	2,24E-01	6,01E-01	3,03E-02	-1,14E-01
POCP	kg NMVOC eq	2,57E-01	3,79E-02	3,75E-02	3,32E-01	6,04E-02	9,26E-02	1,92E-01	1,02E-02	-3,17E-02
ADP-minerals&metals [1]	kg Sb eq	1,91E-02	2,46E-05	2,67E-05	1,92E-02	1,58E-06	6,41E-05	3,99E-05	2,47E-06	-5,14E-05
ADP-fossil [1]	MJ	2,05E+02	8,15E+00	3,02E+01	2,43E+02	2,24E+00	2,12E+01	3,48E+01	1,65E+00	-1,90E+01
WDP [1]	m³ world eq deprived	9,65E+00	4,02E-01	4,54E+00	1,46E+01	1,23E-01	1,05E+00	-4,78E+01	3,83E-01	-1,42E+01
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption									

Indicator	Unit	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
PERE	MJ	2,36E+01	1,69E+00	1,09E+02	1,34E+02	3,63E-01	4,41E+00	1,06E+01	1,32E+02	-9,94E+00
PERM	MJ	0,00E+00	0,00E+00	1,32E+02	1,32E+02	0,00E+00	0,00E+00	0,00E+00	-1,32E+02	0,00E+00
PERT	MJ	2,36E+01	1,69E+00	2,40E+02	2,66E+02	3,63E-01	4,41E+00	1,06E+01	2,32E-01	-9,94E+00
PENRE	MJ	1,99E+02	8,15E+00	0,00E+00	2,07E+02	2,24E+00	2,12E+01	3,48E+01	5,43E+01	-1,90E+01
PENRM	MJ	5,92E+00	0,00E+00	4,67E+01	5,27E+01	0,00E+00	0,00E+00	0,00E+00	-5,27E+01	0,00E+00
PENRT	MJ	2,05E+02	8,15E+00	4,67E+01	2,60E+02	2,24E+00	2,12E+01	3,48E+01	1,65E+00	-1,90E+01
SM	kg	0,00E+00	0,00E+00	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	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	0,00E+00	0,00E+00
FW	m³	2,68E-01	1,29E-02	1,22E-01	4,02E-01	4,04E-03	3,35E-02	-1,02E+00	9,45E-03	-3,23E-01
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of non-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 re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water									

Indicator	Unit	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
HWD	kg	1,17E-02	2,63E-03	1,72E-02	3,15E-02	5,40E-04	6,81E-03	4,34E-02	3,84E-04	-2,40E-02
NHWD	kg	7,00E+00	4,95E+00	1,57E+00	1,35E+01	3,89E-02	1,29E+01	3,85E+02	5,05E+01	-9,12E-01
RWD	kg	6,79E-04	3,06E-05	1,94E-04	9,03E-04	6,03E-06	7,93E-05	2,50E-04	3,20E-06	-7,21E-05
CRU	kg	0,00E+00	0,00E+00	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	2,60E+00	2,60E+00	0,00E+00	0,00E+00	9,50E+02	0,00E+00	0,00E+00
MER	kg	0,00E+00	0,00E+00	1,35E-01	1,35E-01	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	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	0,00E+00	0,00E+00
Acronyms	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 energy, electricity; EET = Exported energy, thermal									
Disclaimer	[1] ADPF, ADPE, Water Use: the results of these environmental impact indicators must be used carefully as the uncertainties of these results are high or as there is limited experience with such indicators									

Biogenic carbon	Unit	Value
in the final product	kg C	0,00E+00
in the final product packaging	kg C	1,72E+00

SF 300 – BULK Ponte della Priula

Results by Declared Unit: 1000 kg

Indicator	Unit	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
GWP-fossil	kg CO2 eq	9,07E+01	1,23E+01	2,86E+00	1,06E+02	4,43E+00	1,90E+01	1,79E+01	1,13E+00	-4,95E+00
GWP-biogenic	kg CO2 eq	1,41E+00	8,41E-03	3,35E-01	1,75E+00	8,98E-04	1,30E-02	6,01E-02	1,30E-03	-1,43E-01
GWP-luluc	kg CO2 eq	1,36E-02	4,05E-03	1,04E-04	1,78E-02	4,53E-04	6,30E-03	6,82E-03	2,38E-03	-2,21E-03
GWP-total	kg CO2 eq	9,21E+01	1,24E+01	3,19E+00	1,08E+02	4,43E+00	1,90E+01	1,80E+01	1,14E+00	-5,08E+00
ODP	kg CFC 11 eq	6,20E-07	2,69E-07	9,74E-09	8,99E-07	6,60E-08	4,15E-07	3,73E-07	2,12E-08	-7,13E-08
AP	mol H+ eq	2,42E-01	4,03E-02	1,46E-03	2,84E-01	3,96E-02	6,11E-02	1,46E-01	6,90E-03	-3,33E-02
EP-freshwater	kg P eq	9,88E-03	8,36E-04	3,26E-05	1,07E-02	1,43E-04	1,30E-03	8,10E-03	1,01E-04	-1,26E-03
EP-marine	kg N eq	7,23E-02	1,37E-02	8,17E-04	8,68E-02	1,84E-02	2,06E-02	5,54E-02	2,79E-03	-8,84E-03
EP-terrestrial	mol N eq	8,61E-01	1,49E-01	5,37E-03	1,02E+00	2,02E-01	2,24E-01	6,01E-01	3,03E-02	-1,14E-01
POCP	kg NMVOC eq	2,39E-01	6,12E-02	3,90E-03	3,04E-01	6,04E-02	9,26E-02	1,92E-01	1,02E-02	-3,17E-02
ADP-minerals&metals [1]	kg Sb eq	9,93E-05	4,12E-05	1,21E-06	1,42E-04	1,58E-06	6,41E-05	3,99E-05	2,47E-06	-5,14E-05
ADP-fossil [1]	MJ	1,69E+02	1,36E+01	4,84E-01	1,83E+02	2,24E+00	2,12E+01	3,48E+01	1,65E+00	-1,90E+01
WDP [1]	m³ world eq deprived	1,01E+01	6,73E-01	1,20E+01	2,28E+01	1,23E-01	1,05E+00	-4,78E+01	3,83E-01	-1,42E+01

Acronyms

GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption

Indicator	Unit	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
PERE	MJ	3,34E+01	2,83E+00	1,33E-01	3,64E+01	3,63E-01	4,41E+00	1,06E+01	2,32E-01	-9,94E+00
PERM	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	3,34E+01	2,83E+00	1,33E-01	3,64E+01	3,63E-01	4,41E+00	1,06E+01	2,32E-01	-9,94E+00
PENRE	MJ	1,52E+02	1,36E+01	4,84E-01	1,66E+02	2,24E+00	2,12E+01	3,48E+01	1,83E+01	-1,90E+01
PENRM	MJ	1,67E+01	0,00E+00	0,00E+00	1,67E+01	0,00E+00	0,00E+00	0,00E+00	-1,67E+01	0,00E+00
PENRT	MJ	1,69E+02	1,36E+01	4,84E-01	1,83E+02	2,24E+00	2,12E+01	3,48E+01	1,65E+00	-1,90E+01
SM	kg	0,00E+00	0,00E+00	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	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	0,00E+00	0,00E+00
FW	m³	2,75E-01	2,15E-02	2,68E-01	5,64E-01	4,04E-03	3,35E-02	-1,02E+00	9,45E-03	-3,23E-01

Acronyms

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

Indicator	Unit	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
HWD	kg	1,15E-02	4,39E-03	2,95E-03	1,88E-02	5,40E-04	6,81E-03	4,34E-02	3,84E-04	-2,40E-02
NHWD	kg	7,42E+00	8,31E+00	2,40E-01	1,60E+01	3,89E-02	1,29E+01	3,85E+02	5,05E+01	-9,12E-01
RWD	kg	6,17E-04	5,11E-05	3,10E-06	6,71E-04	6,03E-06	7,93E-05	2,50E-04	3,20E-06	-7,21E-05
CRU	kg	0,00E+00	0,00E+00	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	3,30E-04	3,30E-04	0,00E+00	0,00E+00	9,50E+02	0,00E+00	0,00E+00
MER	kg	0,00E+00	0,00E+00	4,33E-01	4,33E-01	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	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	0,00E+00	0,00E+00
Acronyms	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 energy, electricity; EET = Exported energy, thermal									
Disclaimer	[1] ADPF, ADPE, Water Use: the results of these environmental impact indicators must be used carefully as the uncertainties of these results are high or as there is limited experience with such indicators									

Biogenic carbon	Unit	Value
in the final product	kg C	0,00E+00
in the final product packaging	kg C	0,00E+00

SF 400 Colleferro

Results by Declared Unit: 1000 kg

Indicator	Unit	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
GWP-fossil	kg CO2 eq	1,02E+02	7,44E+00	7,79E+00	1,17E+02	4,43E+00	1,90E+01	1,79E+01	1,13E+00	-4,95E+00
GWP-biogenic	kg CO2 eq	1,47E+00	5,03E-03	-1,48E+00	1,00E-03	8,98E-04	1,30E-02	6,01E-02	1,30E-03	-1,43E-01
GWP-luluc	kg CO2 eq	1,36E-02	2,42E-03	4,60E-02	6,20E-02	4,53E-04	6,30E-03	6,82E-03	2,38E-03	-2,21E-03
GWP-total	kg CO2 eq	1,03E+02	7,45E+00	6,35E+00	1,17E+02	4,43E+00	1,90E+01	1,80E+01	1,14E+00	-5,08E+00
ODP	kg CFC 11 eq	7,15E-07	1,63E-07	2,13E-07	1,09E-06	6,60E-08	4,15E-07	3,73E-07	2,12E-08	-7,13E-08
AP	mol H+ eq	2,68E-01	2,49E-02	3,05E-02	3,23E-01	3,96E-02	6,11E-02	1,46E-01	6,90E-03	-3,33E-02
EP-freshwater	kg P eq	1,21E-02	4,98E-04	3,68E-03	1,63E-02	1,43E-04	1,30E-03	8,10E-03	1,01E-04	-1,26E-03
EP-marine	kg N eq	7,83E-02	8,60E-03	1,07E-02	9,77E-02	1,84E-02	2,06E-02	5,54E-02	2,79E-03	-8,84E-03
EP-terrestrial	mol N eq	9,32E-01	9,36E-02	1,00E-01	1,13E+00	2,02E-01	2,24E-01	6,01E-01	3,03E-02	-1,14E-01
POCP	kg NMVOC eq	2,56E-01	3,78E-02	3,75E-02	3,31E-01	6,04E-02	9,26E-02	1,92E-01	1,02E-02	-3,17E-02
ADP-minerals&metals [1]	kg Sb eq	1,41E-02	2,46E-05	2,67E-05	1,41E-02	1,58E-06	6,41E-05	3,99E-05	2,47E-06	-5,14E-05
ADP-fossil [1]	MJ	2,04E+02	8,14E+00	3,02E+01	2,43E+02	2,24E+00	2,12E+01	3,48E+01	1,65E+00	-1,90E+01
WDP [1]	m³ world eq deprived	9,60E+00	4,02E-01	4,54E+00	1,45E+01	1,23E-01	1,05E+00	-4,78E+01	3,83E-01	-1,42E+01
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption									

Indicator	Unit	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
PERE	MJ	2,35E+01	1,69E+00	1,09E+02	1,34E+02	3,63E-01	4,41E+00	1,06E+01	1,32E+02	-9,94E+00
PERM	MJ	0,00E+00	0,00E+00	1,32E+02	1,32E+02	0,00E+00	0,00E+00	0,00E+00	-1,32E+02	0,00E+00
PERT	MJ	2,35E+01	1,69E+00	2,40E+02	2,66E+02	3,63E-01	4,41E+00	1,06E+01	2,32E-01	-9,94E+00
PENRE	MJ	1,98E+02	8,14E+00	0,00E+00	2,06E+02	2,24E+00	2,12E+01	3,48E+01	5,43E+01	-1,90E+01
PENRM	MJ	5,92E+00	0,00E+00	4,67E+01	5,27E+01	0,00E+00	0,00E+00	0,00E+00	-5,27E+01	0,00E+00
PENRT	MJ	2,04E+02	8,14E+00	4,67E+01	2,59E+02	2,24E+00	2,12E+01	3,48E+01	1,65E+00	-1,90E+01
SM	kg	0,00E+00	0,00E+00	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	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	0,00E+00	0,00E+00
FW	m³	2,66E-01	1,29E-02	1,22E-01	4,01E-01	4,04E-03	3,35E-02	-1,02E+00	9,45E-03	-3,23E-01
Acronyms	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 re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water									

Indicator	Unit	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
HWD	kg	1,16E-02	2,62E-03	1,72E-02	3,15E-02	5,40E-04	6,81E-03	4,34E-02	3,84E-04	-2,40E-02
NHWD	kg	6,99E+00	4,95E+00	1,57E+00	1,35E+01	3,89E-02	1,29E+01	3,85E+02	5,05E+01	-9,12E-01
RWD	kg	6,77E-04	3,05E-05	1,94E-04	9,02E-04	6,03E-06	7,93E-05	2,50E-04	3,20E-06	-7,21E-05
CRU	kg	0,00E+00	0,00E+00	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	2,60E+00	2,60E+00	0,00E+00	0,00E+00	9,50E+02	0,00E+00	0,00E+00
MER	kg	0,00E+00	0,00E+00	1,35E-01	1,35E-01	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	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	0,00E+00	0,00E+00
Acronyms	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 energy, electricity; EET = Exported energy, thermal									
Disclaimer	[1] ADPF, ADPE, Water Use: the results of these environmental impact indicators must be used carefully as the uncertainties of these results are high or as there is limited experience with such indicators									

Biogenic carbon	Unit	Value
in the final product	kg C	0,00E+00
in the final product packaging	kg C	1,72E+00

SF 400 – BULK Colferro

Results by Declared Unit: 1000 kg

Indicator	Unit	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
GWP-fossil	kg CO ₂ eq	9,87E+01	7,41E+00	2,14E+00	1,08E+02	4,43E+00	1,90E+01	1,79E+01	1,13E+00	-4,95E+00
GWP-biogenic	kg CO ₂ eq	1,48E+00	5,00E-03	6,39E-03	1,49E+00	8,98E-04	1,30E-02	6,01E-02	1,30E-03	-1,43E-01
GWP-luluc	kg CO ₂ eq	1,25E-02	2,41E-03	3,45E-06	1,49E-02	4,53E-04	6,30E-03	6,82E-03	2,38E-03	-2,21E-03
GWP-total	kg CO ₂ eq	1,00E+02	7,42E+00	2,15E+00	1,10E+02	4,43E+00	1,90E+01	1,80E+01	1,14E+00	-5,08E+00
ODP	kg CFC 11 eq	6,55E-07	1,62E-07	2,47E-10	8,17E-07	6,60E-08	4,15E-07	3,73E-07	2,12E-08	-7,13E-08
AP	mol H ⁺ eq	2,55E-01	2,48E-02	5,76E-04	2,81E-01	3,96E-02	6,11E-02	1,46E-01	6,90E-03	-3,33E-02
EP-freshwater	kg P eq	1,12E-02	4,96E-04	3,03E-06	1,17E-02	1,43E-04	1,30E-03	8,10E-03	1,01E-04	-1,26E-03
EP-marine	kg N eq	7,54E-02	8,57E-03	3,23E-04	8,43E-02	1,84E-02	2,06E-02	5,54E-02	2,79E-03	-8,84E-03
EP-terrestrial	mol N eq	8,96E-01	9,32E-02	3,16E-03	9,92E-01	2,02E-01	2,24E-01	6,01E-01	3,03E-02	-1,14E-01
POCP	kg NMVOC eq	2,45E-01	3,77E-02	9,22E-04	2,83E-01	6,04E-02	9,26E-02	1,92E-01	1,02E-02	-3,17E-02
ADP-minerals&metals [1]	kg Sb eq	9,07E-05	2,45E-05	3,31E-08	1,15E-04	1,58E-06	6,41E-05	3,99E-05	2,47E-06	-5,14E-05
ADP-fossil [1]	MJ	1,90E+02	8,11E+00	1,72E-02	1,98E+02	2,24E+00	2,12E+01	3,48E+01	1,65E+00	-1,90E+01
WDP [1]	m ³ world eq deprived	9,15E+00	4,00E-01	1,31E-03	9,55E+00	1,23E-01	1,05E+00	-4,78E+01	3,83E-01	-1,42E+01
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption									

Indicator	Unit	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
PERE	MJ	2,18E+01	1,68E+00	4,46E-03	2,34E+01	3,63E-01	4,41E+00	1,06E+01	2,32E-01	-9,94E+00
PERM	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	2,18E+01	1,68E+00	4,46E-03	2,34E+01	3,63E-01	4,41E+00	1,06E+01	2,32E-01	-9,94E+00
PENRE	MJ	1,90E+02	8,11E+00	1,72E-02	1,98E+02	2,24E+00	2,12E+01	3,48E+01	1,77E+00	-1,90E+01
PENRM	MJ	1,12E-01	0,00E+00	0,00E+00	1,12E-01	0,00E+00	0,00E+00	0,00E+00	-1,12E-01	0,00E+00
PENRT	MJ	1,90E+02	8,11E+00	1,72E-02	1,98E+02	2,24E+00	2,12E+01	3,48E+01	1,65E+00	-1,90E+01
SM	kg	0,00E+00	0,00E+00	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	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	0,00E+00	0,00E+00
FW	m ³	2,54E-01	1,28E-02	4,00E-05	2,67E-01	4,04E-03	3,35E-02	-1,02E+00	9,45E-03	-3,23E-01
Acronyms	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									

Indicator	Unit	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
HWD	kg	1,06E-02	2,61E-03	2,21E-04	1,35E-02	5,40E-04	6,81E-03	4,34E-02	3,84E-04	-2,40E-02
NHWD	kg	6,89E+00	4,92E+00	1,11E-02	1,18E+01	3,89E-02	1,29E+01	3,85E+02	5,05E+01	-9,12E-01
RWD	kg	6,33E-04	3,04E-05	1,07E-07	6,64E-04	6,03E-06	7,93E-05	2,50E-04	3,20E-06	-7,21E-05
CRU	kg	0,00E+00	0,00E+00	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	7,54E-02	7,54E-02	0,00E+00	0,00E+00	9,50E+02	0,00E+00	0,00E+00
MER	kg	0,00E+00	0,00E+00	1,04E-02	1,04E-02	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	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	0,00E+00	0,00E+00
Acronyms	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 energy, electricity; EET = Exported energy, thermal									
Disclaimer	[1] ADPF, ADPE, Water Use: the results of these environmental impact indicators must be used carefully as the uncertainties of these results are high or as there is limited experience with such indicators									

Biogenic carbon	Unit	Value
in the final product	kg C	0,00E+00
in the final product packaging	kg C	0,00E+00

BINDER FOR SCREEDS Colleferro

Results by Declared Unit: 1000 kg

Indicator	Unit	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
GWP-fossil	kg CO2 eq	4,62E+02	1,53E+01	2,14E+00	4,79E+02	4,43E+00	1,90E+01	1,79E+01	1,13E+00	-4,95E+00
GWP-biogenic	kg CO2 eq	7,87E+00	1,04E-02	6,39E-03	7,88E+00	8,98E-04	1,30E-02	6,01E-02	1,30E-03	-1,43E-01
GWP-luluc	kg CO2 eq	6,04E-02	5,02E-03	3,45E-06	6,54E-02	4,53E-04	6,30E-03	6,82E-03	2,38E-03	-2,21E-03
GWP-total	kg CO2 eq	4,70E+02	1,53E+01	2,15E+00	4,87E+02	4,43E+00	1,90E+01	1,80E+01	1,14E+00	-5,08E+00
ODP	kg CFC 11 eq	2,09E-06	3,34E-07	2,47E-10	2,43E-06	6,60E-08	4,15E-07	3,73E-07	2,12E-08	-7,13E-08
AP	mol H+ eq	1,01E+00	5,01E-02	5,76E-04	1,06E+00	3,96E-02	6,11E-02	1,46E-01	6,90E-03	-3,33E-02
EP-freshwater	kg P eq	4,55E-02	1,03E-03	3,03E-06	4,65E-02	1,43E-04	1,30E-03	8,10E-03	1,01E-04	-1,26E-03
EP-marine	kg N eq	2,95E-01	1,71E-02	3,23E-04	3,12E-01	1,84E-02	2,06E-02	5,54E-02	2,79E-03	-8,84E-03
EP-terrestrial	mol N eq	3,37E+00	1,86E-01	3,16E-03	3,56E+00	2,02E-01	2,24E-01	6,01E-01	3,03E-02	-1,14E-01
POCP	kg NMVOC eq	9,45E-01	7,61E-02	9,22E-04	1,02E+00	6,04E-02	9,26E-02	1,92E-01	1,02E-02	-3,17E-02
ADP-minerals&metals [1]	kg Sb eq	4,53E-04	5,10E-05	3,31E-08	5,05E-04	1,58E-06	6,41E-05	3,99E-05	2,47E-06	-5,14E-05
ADP-fossil [1]	MJ	7,74E+02	1,69E+01	1,72E-02	7,91E+02	2,24E+00	2,12E+01	3,48E+01	1,65E+00	-1,90E+01
WDP [1]	m³ world eq deprived	3,42E+01	8,34E-01	1,31E-03	3,50E+01	1,23E-01	1,05E+00	-4,78E+01	3,83E-01	-1,42E+01
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption									

Indicator	Unit	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
PERE	MJ	1,48E+02	3,51E+00	4,46E-03	1,52E+02	3,63E-01	4,41E+00	1,06E+01	2,32E-01	-9,94E+00
PERM	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	1,48E+02	3,51E+00	4,46E-03	1,52E+02	3,63E-01	4,41E+00	1,06E+01	2,32E-01	-9,94E+00
PENRE	MJ	7,74E+02	1,69E+01	1,72E-02	7,91E+02	2,24E+00	2,12E+01	3,48E+01	1,77E+00	-1,90E+01
PENRM	MJ	1,12E-01	0,00E+00	0,00E+00	1,12E-01	0,00E+00	0,00E+00	0,00E+00	-1,12E-01	0,00E+00
PENRT	MJ	7,74E+02	1,69E+01	1,72E-02	7,91E+02	2,24E+00	2,12E+01	3,48E+01	1,65E+00	-1,90E+01
SM	kg	0,00E+00	0,00E+00	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	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	0,00E+00	0,00E+00
FW	m³	9,99E-01	2,67E-02	4,00E-05	1,03E+00	4,04E-03	3,35E-02	-1,02E+00	9,45E-03	-3,23E-01
Acronyms	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 re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water									

Indicator	Unit	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
HWD	kg	4,77E-02	5,44E-03	2,21E-04	5,33E-02	5,40E-04	6,81E-03	4,34E-02	3,84E-04	-2,40E-02
NHWD	kg	3,92E+01	1,03E+01	1,11E-02	4,95E+01	3,89E-02	1,29E+01	3,85E+02	5,05E+01	-9,12E-01
RWD	kg	2,85E-03	6,33E-05	1,07E-07	2,92E-03	6,03E-06	7,93E-05	2,50E-04	3,20E-06	-7,21E-05
CRU	kg	0,00E+00	0,00E+00	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	7,54E-02	7,54E-02	0,00E+00	0,00E+00	9,50E+02	0,00E+00	0,00E+00
MER	kg	0,00E+00	0,00E+00	1,04E-02	1,04E-02	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	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	0,00E+00	0,00E+00
Acronyms	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 energy, electricity; EET = Exported energy, thermal									
Disclaimer	[1] ADPF, ADPE, Water Use: the results of these environmental impact indicators must be used carefully as the uncertainties of these results are high or as there is limited experience with such indicators									

Biogenic carbon	Unit	Value
in the final product	kg C	0,00E+00
in the final product packaging	kg C	0,00E+00

GUIDELINES

Guidelines	UNI ISO 14040: 2021
	UNI ISO 14044: 2021
	EN ISO 14025:2010
	EN 15804:2012+A2:2019/AC:2021
	PCR per i prodotti da costruzione: ICMQ-001/15 rev 3.2 (compliant to EN 15804+A2
	LCA Report _Analisi del ciclo di vita di premiscelati, cementi e leganti plastici, pitture e tonachini Novembre 2025 _rev.05
	Regolamento EPDITALY v. 6.0 Published on: 30/10/2023

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