ENVIRONMENTAL PRODUCT DECLARATION

Finishing Plaster Line

In accordance with: ISO 14025:2006, EN 15804:2012+A2:2019/AC:2021

Products included in the EPD:

Argatherm, Argacem HP, Argatherm Acoustix, Argatherm Ultrafine

An EPD may be updated or depublished if conditions change. To find the latest version of the EPD and to confirm its validity, see www.environdec.com

EPD of multiple products based on worst-case results

EPD Owner
Diasen Srl

Programme
International EPD System
www.environdec.com

Programme operator
EPD International AB

Registration number
EPD-IES-0030964:001

Version date
2026-06-18

Validity date
2031-06-17



EPD INTERNATIONAL EPD SYSTEM

ECO PLATFORM EPD VERIFIED

DIASEN

GENERAL INFORMATION

Programme information

Programme	International EPD System
Address	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
Website	www.environdec.com
E-mail	support@environdec.com

Product category rules

CEN standard EN 15804 serves as the Core Product Category Rules (PCR)	
Product Category Rules (PCR)	2019:14 Construction products (EN 15804+A2) (version 2.0.1) 2.0.1
PCR review was conducted by	The Technical Committee of the International EPD System. See www.environdec.com for a list of members. Review chair: Rob Rouwette (chair), Noa Meron (co-chair). The review panel may be contacted via the Secretariat www.environdec.com/support.

Verification

Independent third-party verification of the declaration and data, according to ISO 14025:2006, via	☑ EPD verification through an individual EPD verification ☐ EPD verification through EPD Process Certification* ☐ EPD verification through a fully pre-verified tool
Third-party verifier	Certiquality Srl
Accredited by	Accredia
Accredited certification body address	Italy
Procedure for follow-up of data during EPD validity involves third party verifier	☑ Yes ☐ No

*EPD Process Certification involves an accredited certification body certifying and periodically auditing the EPD process and conducting external and independent verification of EPDs that are regularly published. More information can be found in the General Programme Instructions on www.environdec.com.

Ownership and limitations on use of EPD

Limitations

EPDs within the same product category but published in different EPD programmes, may not be comparable. For two EPDs to be comparable, they shall be based on the same PCR (including the same first-digit version number) or be based on fully aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have identical scope in terms of included life-cycle stages (unless the excluded life-cycle stage is demonstrated to be insignificant); apply identical impact assessment methods (including the same version of characterisation factors); and be valid at the time of comparison.

Ownership

The EPD Owner has the sole ownership, liability, and responsibility for the EPD.

INFORMATION ABOUT EPD OWNER

EPD Owner	Diasen Srl
Contact person name	Giulia Mengotti
Contact person e-mail	giulia.mengotti@diasen.com
Organisation address	Zona industriale Berbentina, 5, 60041 - Sassoferrato (AN) - Italy 60041 Sassoferrato Italy
LCA Practitioner	Roberto Petrucci, roberto.petrucci@unipg.it

Description of the organisation of the EPD Owner

Diasen is an Italian company operating in the architecture and sustainable building materials sector, committed to developing biophilic solutions and systems that foster more balanced and mutually beneficial relationships between humans and nature, and between built environments and living cycles. Its solutions address needs for comfort and aesthetic quality—such as thermal and acoustic insulation, surface protection, and spatial enhancement—and are designed for public construction, private architecture, and design, with particular attention to how materials interact over time with environmental factors.

The company's activities are guided by compliance with environmental regulations and by a structured approach aimed at identifying, monitoring, and reducing impacts. Since 2007, Diasen has adopted a certified Environmental Management System in accordance with ISO 14001:2015, alongside ISO 9001:2015 and ISO 45001:2018 standards.

Diasen is also a certified B Corp®, demonstrating a commitment verified by independent third parties that attest to its social and environmental responsibility. More than 40 products have undergone LEED®, WELL®, and BREEAM® mapping to support their integration into sustainable building protocols and advanced, high-performance architectural frameworks.

Operational practices include monitoring material flows to limit waste generation and increase recovery where technically feasible. Research and Development (R&D) focuses on integrating raw materials derived from industrial by-products and recoverable streams, prioritizing durability and long-term resource efficiency—key indicators of quality in relation to market outputs.
Product and solution development is oriented toward improving thermal performance and reducing building energy demand. At the same time, the company places strong emphasis on indoor environmental quality and on the long-term interaction between materials, people, and ecosystems, as these aspects are integral to its mission: creating authentic spaces and environments that support human well-being, combining both functional and experiential value.


DIASEN

PRODUCT INFORMATION

Product name	Argatherm
Product identification	The products belonging to the Finishing Plaster Line are uniquely identified according to European harmonized standards for construction products and hold the mandatory CE marking. All products within this group comply with, are tested, and are certified under the following standard: - EN 998-1: Specification for mortar for masonry - Part 1: Rendering and plastering mortar (specifically as finishing plasters and skim coats designed to optimize thermal, acoustic, and breathability performance).
Product description	Thermal insulating premixed Finishing Plaster, formulated with natural hydraulic lime (NHL 3.5), expanded cork, and mineral-based inerts. It is ideal for finishing Diathonite line plasters, enhancing energy efficiency and indoor comfort. This product ensures excellent thermal insulation and high breathability, preventing condensation and mold formation. Ideal for both new constructions and renovation projects.
Technical purpose of product	The Finishing Plaster Line consists of high-breathability premixed skim coats and finishing plasters designed to optimize building energy efficiency and indoor comfort. They are formulated with different binders and aggregates — such as hydrated lime, natural hydraulic lime (NHL 3.5), expanded cork, and mineral fillers — depending on the specific product variant. Intended for both indoor and outdoor applications in both new constructions and renovation projects, their primary technical functions include excellent moisture management through high vapor permeability, prevention of condensation and mold, thermal insulation enhancement, and acoustic sound absorption. They are specifically ideal as final decorative and functional layers over insulating plaster systems.
Manufacturing or service provision description	The manufacturing process of the Finishing Plaster Line is a batch (discontinuous) process where all components are mechanically blended. Raw materials are received and stored depending on their characteristics, either unpackaged in dedicated silos, in big bags, or in standard warehouse packaging transported via electric forklifts. Additionally, a specific bulk raw material undergoes a volume reduction process through a specialized milling stage before being automatically fed into the production mixer according to the specific formula. Once mixed, the dry final product is packaged in paper and plastic-based bags, palletized on wooden pallets, secured with a protective polymer hooding film, and stored in the finished goods warehouse. Quality control is strictly performed both during the production phase and prior to shipment. The manufacturing process requires no water and operates virtually as a closed-loop system, generating no scraps or waste, while most of the residual dust collected by the filtration system is recycled back into the process.
Material properties	Volumetric mass density: 1165 kg/m^3 Thermal conductivity: 0.128 W/m.K
Manufacturing site	DIASEN SRL Zona Industriale Berbentina 5 60041 Sassoferrato Italy
UN CPC code	37410. Plasters
Geographical scope(s)	Global

PRODUCT IMAGES




MADE IN ITALY
DIASEN
GREEN BUILDING FUTURE
RASANTE ECOLOGICO TERMICO BASE CALCE
per interni ed esterni
THERMAL ECOLOGICAL
LIME-BASED SMOOTHER
for indoor and outdoor application
ENDUIT DE LISSAGE
THERMIQUE ECOLOGIQUE
A BASE DE CHAUX
REVOQUE FINO
ECOLÓGICO Y TÉRMICO
A BASE DE CAL
ÖKOLOGISCHES UND
THERMISCHES GLÄTTEN
AUF KALK-BASIS
25Kg
ARGATHERM
λ 0.128
ARGATHERM
WWW.DIASEN.COM

PRODUCT INFORMATION

Product name	Argacem HP
Product identification	The products belonging to the Finishing Plaster Line are uniquely identified according to European harmonized standards for construction products and hold the mandatory CE marking. All products within this group comply with, are tested, and are certified under the following standard: - EN 998-1: Specification for mortar for masonry - Part 1: Rendering and plastering mortar (specifically as finishing plasters and skim coats designed to optimize thermal, acoustic, and breathability performance).
Product description	High-breathability premixed Finishing Plaster formulated with hydrated lime and inert limestone minerals. It is characterized by a spongy-structured powder that ensures excellent moisture management and high vapor permeability. It is ideal for finishing Diathonite line plasters, enhancing energy efficiency and indoor comfort. Suitable for both indoor and outdoor applications, it is perfect for new constructions and renovations.
Technical purpose of product	The Finishing Plaster Line consists of high-breathability premixed skim coats and finishing plasters designed to optimize building energy efficiency and indoor comfort. They are formulated with different binders and aggregates — such as hydrated lime, natural hydraulic lime (NHL 3.5), expanded cork, and mineral fillers — depending on the specific product variant. Intended for both indoor and outdoor applications in both new constructions and renovation projects, their primary technical functions include excellent moisture management through high vapor permeability, prevention of condensation and mold, thermal insulation enhancement, and acoustic sound absorption. They are specifically ideal as final decorative and functional layers over insulating plaster systems.
Manufacturing or service provision description	The manufacturing process of the Finishing Plaster Line is a batch (discontinuous) process where all components are mechanically blended. Raw materials are received and stored depending on their characteristics, either unpackaged in dedicated silos, in big bags, or in standard warehouse packaging transported via electric forklifts. Additionally, a specific bulk raw material undergoes a volume reduction process through a specialized milling stage before being automatically fed into the production mixer according to the specific formula. Once mixed, the dry final product is packaged in paper and plastic-based bags, palletized on wooden pallets, secured with a protective polymer hooding film, and stored in the finished goods warehouse. Quality control is strictly performed both during the production phase and prior to shipment. The manufacturing process requires no water and operates virtually as a closed-loop system, generating no scraps or waste, while most of the residual dust collected by the filtration system is recycled back into the process.
Material properties	Volumetric mass density: 1350 kg/m^3 Thermal conductivity: 0.2 W/m.K
Manufacturing site	DIASEN SRL Zona Industriale Berbentina 5 60041 Sassoferrato Italy
UN CPC code	37410. Plasters
Geographical scope(s)	Global

PRODUCT IMAGES




DIASEN
GREEN BUILDING FUTURE
ARGACEM HP®
ARGACEM HP®
EPD
25Kg

PRODUCT INFORMATION

Product name	Argatherm Acoustix
Product identification	The products belonging to the Finishing Plaster Line are uniquely identified according to European harmonized standards for construction products and hold the mandatory CE marking. All products within this group comply with, are tested, and are certified under the following standard: - EN 998-1: Specification for mortar for masonry - Part 1: Rendering and plastering mortar (specifically as finishing plasters and skim coats designed to optimize thermal, acoustic, and breathability performance).
Product description	Acoustic and lightweight Finishing Plaster formulated with expanded mineral fillers, featuring a microporous internal structure that guarantees exceptional lightness, thermal insulation, and sound-absorbing properties. It has an NRC=0.50 when applied over Diathonite Acoustix plaster. This product should be used in combination with Diathonite Acoustix and Diathonite Acoustix+ plasters to optimize acoustic and thermal performance. Ideal for applications where noise reduction and comfort are a priority.
Technical purpose of product	The Finishing Plaster Line consists of high-breathability premixed skim coats and finishing plasters designed to optimize building energy efficiency and indoor comfort. They are formulated with different binders and aggregates — such as hydrated lime, natural hydraulic lime (NHL 3.5), expanded cork, and mineral fillers — depending on the specific product variant. Intended for both indoor and outdoor applications in both new constructions and renovation projects, their primary technical functions include excellent moisture management through high vapor permeability, prevention of condensation and mold, thermal insulation enhancement, and acoustic sound absorption. They are specifically ideal as final decorative and functional layers over insulating plaster systems.
Manufacturing or service provision description	The manufacturing process of the Finishing Plaster Line is a batch (discontinuous) process where all components are mechanically blended. Raw materials are received and stored depending on their characteristics, either unpackaged in dedicated silos, in big bags, or in standard warehouse packaging transported via electric forklifts. Additionally, a specific bulk raw material undergoes a volume reduction process through a specialized milling stage before being automatically fed into the production mixer according to the specific formula. Once mixed, the dry final product is packaged in paper and plastic-based bags, palletized on wooden pallets, secured with a protective polymer hooding film, and stored in the finished goods warehouse. Quality control is strictly performed both during the production phase and prior to shipment. The manufacturing process requires no water and operates virtually as a closed-loop system, generating no scraps or waste, while most of the residual dust collected by the filtration system is recycled back into the process.
Material properties	Volumetric mass density: 1250 kg/m^3 Thermal conductivity: 0.2 W/m.K
Manufacturing site	DIASEN SRL Zona Industriale Berbentina 5 60041 Sassoferrato Italy
UN CPC code	37410. Plasters
Geographical scope(s)	Global

PRODUCT IMAGES




DIASEN
ARGATHERM
ACOUSTIX®
15Kg
CE

PRODUCT INFORMATION

Product name	Argatherm Ultrafine
Product identification	The products belonging to the Finishing Plaster Line are uniquely identified according to European harmonized standards for construction products and hold the mandatory CE marking. All products within this group comply with, are tested, and are certified under the following standard: - EN 998-1: Specification for mortar for masonry - Part 1: Rendering and plastering mortar (specifically as finishing plasters and skim coats designed to optimize thermal, acoustic, and breathability performance).
Product description	Extra-fine finishing plaster designed to achieve a perfectly smooth white finish for both indoor and outdoor applications. It has excellent breathability and water vapor permeability, making it ideal for use as a base coat plaster. This product is also suitable for precast concrete panels, ensuring effective moisture management and contributing to improved indoor air quality. Its fine grain allows for a polished and elegant finish while maintaining high-performance characteristics.
Technical purpose of product	The Finishing Plaster Line consists of high-breathability premixed skim coats and finishing plasters designed to optimize building energy efficiency and indoor comfort. They are formulated with different binders and aggregates — such as hydrated lime, natural hydraulic lime (NHL 3.5), expanded cork, and mineral fillers — depending on the specific product variant. Intended for both indoor and outdoor applications in both new constructions and renovation projects, their primary technical functions include excellent moisture management through high vapor permeability, prevention of condensation and mold, thermal insulation enhancement, and acoustic sound absorption. They are specifically ideal as final decorative and functional layers over insulating plaster systems.
Manufacturing or service provision description	The manufacturing process of the Finishing Plaster Line is a batch (discontinuous) process where all components are mechanically blended. Raw materials are received and stored depending on their characteristics, either unpackaged in dedicated silos, in big bags, or in standard warehouse packaging transported via electric forklifts. Additionally, a specific bulk raw material undergoes a volume reduction process through a specialized milling stage before being automatically fed into the production mixer according to the specific formula. Once mixed, the dry final product is packaged in paper and plastic-based bags, palletized on wooden pallets, secured with a protective polymer hooding film, and stored in the finished goods warehouse. Quality control is strictly performed both during the production phase and prior to shipment. The manufacturing process requires no water and operates virtually as a closed-loop system, generating no scraps or waste, while most of the residual dust collected by the filtration system is recycled back into the process.
Material properties	Volumetric mass density: 1150 kg/m^3 Thermal conductivity: 0.35 W/m.K
Manufacturing site	DIASEN SRL Zona Industriale Berbentina 5 60041 Sassoferrato Italy
UN CPC code	37410. Plasters
Geographical scope(s)	Global

PRODUCT IMAGES




MADE IN ITALY
DIASEN
GREEN BUILDING FUTURE
RASANTE EXTRAFINE
ad elevata traspirabilità
EXTRA-FINE SMOOTHING PLASTER
ENDUIT DE LISSAGE LISSE
REVOQUE DE CAL LISO
BARRAMENTO ESTANHADO LISO
GLATTPUTZ
25Kg
ARGATHERM
ULTRAFINE
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ARGATHERM

TECHNICAL CHARACTERISTICS AND PERFORMANCE

Technical performance

Product name	Type category	Thermal Conductivity (W/mK)	Compression Strength (N/mm^2)	Fire reaction	Vapour permeability coefficient - μ	Adhesion (N/mm^2)	Specific weight (kg/m^3)	Chloride Content (Cl)	Capillarity water absorption ($kg/m^2h^{0.5}$)	Type category	Type category
Argacem HP	Finishing Plasters	< 0.200	CS II	Class A1	≤ 15	≥ 0.10 - FP:B	1350±135	0.111	ND		
Argatherm	Finishing Plasters	0.128	CS II	Class A1	≤ 15	ND	1165±116.5	ND	ND		
Argatherm Acoustix	Acoustic Finishing Plasters	< 0.200	CS II	Class A1	≤ 15	≥ 1.00 - FP:B	1250±187	< 0.200	ND		
Argatherm Ultrafine	Finishing Plasters	0.350	CS II	Class A1	8	ND	ND	0.35	≤ 190		

CONTENT DECLARATION

Content declaration of multiple products	The content declaration in this multi-product EPD represents a conservative formulation designed to reflect the worst-case scenario among the products included in the Diathonite line. This ensures that the environmental impacts declared represent the upper limit for all variations within the product group.
Hazardous and toxic substances	The product does not contain any substances from the SVHC candidate list in concentrations exceeding 0.1% of its weight.

PRODUCT CONTENT

Content name	Mass, kg	Post-consumer recycled material, mass-% of product	Biogenic material, mass-% of product	Biogenic material[1], kg C/declared unit
Perlite	0.015	0	0	0
Binders	0.38	0	0	0.00000079
Organic Additives	0.008	0	0	0
Inorganic Additives	0.002	0	0	0
Calcium Carbonate	0.4	0	0	0
Expanded glass	0.2	44.81	0	0
Total	**1.005**	**44.81**	**0**	**0.00000079**
Note 1	1 kg biogenic carbon is equivalent to 44/12 kg of CO_2			

PACKAGING MATERIALS

Material name	Mass, kg	Mass-% (versus the product)	Biogenic material[1], kg C/declared unit
Wood	0.0207	2.07	0.0087
Paper/PE Box	0.00839	0.84	0.002515
LDPE Film	0.000363	0.04	0
Total	**0.029453**	**2.95**	**0.011215**
Note 1	1 kg biogenic carbon is equivalent to 44/12 kg of CO_2		

LCA INFORMATION

EPD based on declared or functional unit	Declared unit
Declared unit and reference flow	Argatherm Mass: 1 kg
Conversion factor to mass	1
Are infrastructure or capital goods included in any upstream, core or downstream processes?	☐ Yes ☑ No
Data sources used for this EPD	ecoinvent database (general) ecoinvent 3.11 database
LCA Software	SimaPro 10.3
Version of the EN 15804 reference package	EF Reference Package 3.1
Characterisation methods	EN 15804. VERSION: EF 3.1
Technology description including background system	The products considered are high-breathability premixed skim coats and finishing plasters belonging to the Finishing Plaster Line (Argacem HP, Argatherm, Argatherm Acoustix, and Argatherm Ultrafine). This multi-product EPD reflects a conservative worst-case scenario formulation among the product variations. The products mainly consist of calcium carbonate (0,19 to 0,706 kg/kg) and hydrated lime (0,0509 to 0,172 kg/kg). The manufacturing process is an industrial batch blending operation that requires no water and generates zero waste. Manufacturing operations are powered by an electricity mix composed of 19.10% self-produced solar energy and 80.90% from the national grid. The LCA background system relies on the Ecoinvent 3.11 database and SimaPro 10.3.0 software, covering a 'Cradle-to-gate' boundary (Modules A1-A3).
Scrap (recycled material) inputs contribution level	Less than 10% of the GWP-GHG results in modules A1-A3 come from scrap inputs

Data quality assessment

Description of data quality assessment and reference years	2025, no data with poor or very poor quality used in the analysis.

DATA QUALITY ASSESSMENT

Process name	Source type	Source	Reference year	Data category	Share of primary data, of GWP-GHG results for A1-A3
Manufacturing of product	Collected data	EPD owner	2025	Primary Data	0%
Generation of electricity used in manufacturing of product	Collected data and Database	EPD Owner and AIB Residual Mix	2025	Primary Data	34.93%
Input Raw materials	Collected data	EPD Owner Ecoinvent 3.11	2025	Primary Data, Secondary Data	0%
Other processes	Database	Ecoinvent 3.11	2025	Secondary Data	0%
Total share of primary data, of GWP-GHG results for A1-A3					**34.93%**
Note	The share of primary data is calculated based on GWP-GHG results. It is a simplified indicator for data quality that supports the use of more primary data to increase the representativeness of and comparability between EPDs. Note that the indicator does not capture all relevant aspects of data quality and is not comparable across product categories.				

ELECTRICITY USED IN THE MANUFACTURING PROCESS IN A3 (A5 FOR SERVICES)

Type of electricity mix	Specific electricity mix as generated, or purchased from an electricity supplier, demonstrated by a contractual instrument	
Energy sources	Hydro	1.2%
	Wind	0.39%
	Solar	7.14%
	Biomass	0.75%
	Geothermal	0%
	Waste	0%
	Nuclear	4.73%
	Natural gas	44.69%
	Coal	0.09%
	Oil	6.6%
	Peat	0%

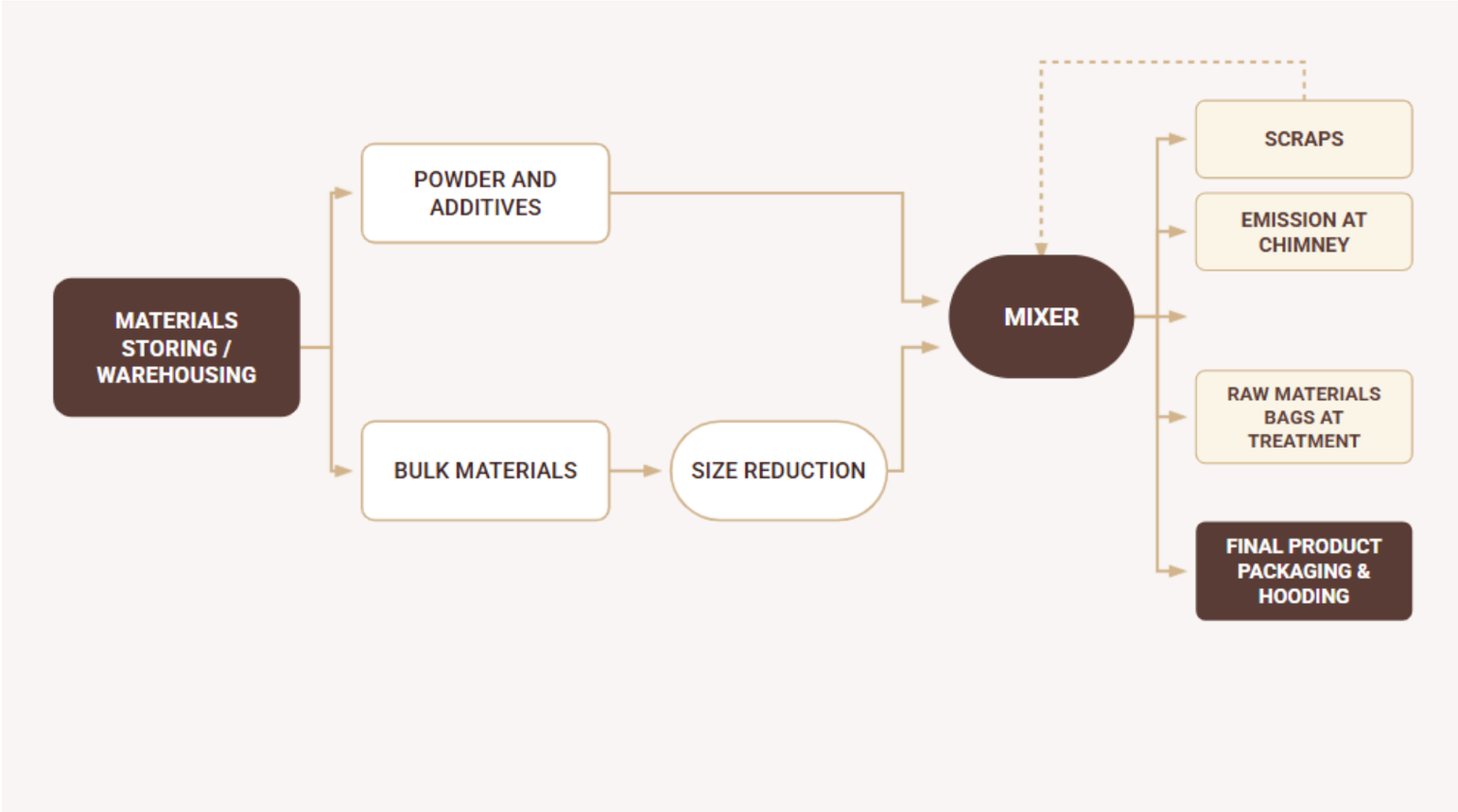
	Other	0%
Climate impact (GWP-GHG):	0.78 kg CO_2 eq./kWh	

SYSTEM BOUNDARY

Description of the System boundary	d) Cradle to gate (A1-A3).
Excluded modules	No, there is no excluded module, or there are no excluded modules

	Product stage			Construction process stage		Use stage							End of life stage				Beyond product life cycle
	Raw material supply	Transport	Manufacturing	Transport to site	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
Module	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Modules declared	X	X	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Geography	Global	Global	Italy	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Share of specific data	34.93%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation - products	10%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation - sites	0%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Disclaimer	The share of specific/primary data and both variations (products and sites) refer to GWP-GHG results only.																

Process flow diagram(s) related images



DEFAULT SCENARIO

Name of the default scenario	Cradle-to-gate
Description of the default scenario	The system boundary of this EPD follows a 'Cradle-to-gate' approach, exclusively covering the product stage, which includes raw material supply (Module A1), transport to the manufacturing facility (Module A2), and manufacturing operations (Module A3). The construction stage (Modules A4-A5), use stage (Modules B1-B7), end-of-life stage (Modules C1-C4), and benefits and loads beyond the system boundary (Module D) are omitted and not declared.

ENVIRONMENTAL PERFORMANCE

The estimated impact results are only relative statements, which do not indicate the endpoints of the impact categories, exceeding threshold values, safety margins and/or risks.

Mandatory environmental performance indicators according to EN 15804

Impact category	Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Climate change - total	GWP-total	kg CO_2 eq.	6.70E-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Climate change - fossil	GWP-fossil	kg CO_2 eq.	6.70E-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Climate change - biogenic	GWP-biogenic	kg CO_2 eq.	2.93E-4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Climate change - land use and land-use change	GWP-luluc	kg CO_2 eq.	2.32E-4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ozone depletion	ODP	kg CFC-11 eq.	9.39E-7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acidification	AP	mol H^+ eq.	2.70E-3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Eutrophication aquatic freshwater	EP-freshwater	kg P eq.	1.46E-4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Eutrophication aquatic marine	EP-marine	kg N eq.	5.59E-4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Eutrophication terrestrial	EP-terrestrial	mol N eq.	6.12E-3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Photochemical ozone formation	POCP	kg NMVOC eq.	2.24E-3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Depletion of abiotic resources - minerals and metals	ADP-minerals&metals[1]	kg Sb eq.	6.41E-6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Depletion of abiotic resources - fossil fuels	ADP-fossil[1]	MJ, net calorific value	8.04E+0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Water use	WDP[1]	m^3 world eq. deprived	1.20E-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
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																
Disclaimer 1	The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator																

Additional mandatory environmental performance indicators

Impact category	Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Climate change - GWP-GHG	GWP-GHG[1]	kg CO_2 eq.	5.90E-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acronyms	GWP-GHG = Global warming potential greenhouse gas.																
Disclaimer 1	The GWP-GHG indicator is termed GWP-IOBC/GHG in the ILCD+EPD+ data format. The indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO_2 is set to zero.																

Additional voluntary environmental performance indicators according to EN 15804

Impact category	Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Particulate matter emissions	PM	Disease incidence	1.90E-8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ionizing radiation - human health	IRP[1]	kBq U235 eq.	1.69E-2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Eco-toxicity - freshwater	ETP-fw[2]	CTUe	5.12E+0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Human toxicity - cancer effects	HTP-c[2]	CTUh	2.92E-10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Human toxicity - non-cancer effects	HTP-nc[2]	CTUh	5.31E-9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Land-use related impacts/soil quality	SQP[2]	Dimensionless	5.73E+0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acronyms	PM = Potential incidence of disease due to particulate matter emissions; IRP = Potential human exposure efficiency relative to U235; ETP-fw = Potential comparative toxic unit for ecosystems; HTP-c = Potential comparative toxic unit for humans; HTP-nc = Potential comparative toxic unit for humans; SQP = Potential soil quality index.																
Disclaimer 1	This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.																
Disclaimer 2	The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.																

Resource use indicators according to EN 15804

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ, net calorific value	1.16E+0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PERM	MJ, net calorific value	0.00E+0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PERT	MJ, net calorific value	1.16E+0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PENRE	MJ, net calorific value	7.27E+0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PENRM	MJ, net calorific value	8.42E-2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PENRT	MJ, net calorific value	7.27E+0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SM	kg	0.00E+0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
RSF	MJ, net calorific value	0.00E+0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NRSF	MJ, net calorific value	2.28E-4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FW	m^3	1.10E-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
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.															

Waste indicators according to EN 15804

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
HWD	kg	0.00E+0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NHWD	kg	4.70E-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
RWD	kg	4.97E-6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acronyms	HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed.															

Output flow indicators according to EN 15804

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
CRU	kg	0.00E+0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MFR	kg	0.00E+0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MER	kg	0.00E+0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
EEE	MJ, net calorific value	0.00E+0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
EET	MJ, net calorific value	0.00E+0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acronyms	CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy.															

ABBREVIATIONS

Not Applicable

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VERSION HISTORY

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- Original version of the EPD

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