Environmental Product Declaration

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

Sanitary ceramic products with Vitreous China mixture

from

Ceramica Dolomite S.p.A.

EPD of multiple products, based on the average results of the product group

Programme:	The International EPD® System, www.environdec.com
Programme operator:	EPD International AB
EPD registration number:	EPD-IES-0005343
Publication date:	2025-03-26
Valid until:	2030-03-25

An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at www.environdec.com

General information

Programme information

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

Accountabilities for PCR, LCA and independent, third-party verification
Product Category Rules (PCR)
CEN standard EN 15804 serves as the Core Product Category Rules (PCR)
Product Category Rules (PCR): PCR 2019:14 Construction products and construction services, version 1.3.4.
PCR review was conducted by: The Technical Committee of the International EPD® System. Review chair: Claudia A. Peña, University of Concepción, Chile. A full list of members available on www.environdec.com.
Life Cycle Assessment (LCA)
LCA accountability: Tecno ESG s.r.l. (www.tecnoesg.it) and Spin Life s.r.l. (www.spinlife.it)
Third-party verification
Independent third-party verification of the declaration and data, according to ISO 14025:2006, via: ☐ EPD verification by individual verifier ☒ EPD verification by accredited certification body Third-party verification: Bureau Veritas Italia S.p.A. is an approved certification body accountable for the third-party verification (Accreditation number 009VV)
Procedure for follow-up of data during EPD validity involves third party verifier: ☐ Yes ☒ No

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

EPDs within the same product category but registered in different EPD programmes, or not compliant with EN 15804, may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same version number) or be based on fully-aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterisation factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.

Company information

Owner of the EPD: Ceramica Dolomite S.p.A.

Contact: Alessandro Moretto (alessandro.moretto@ceramicadolomite.it)

Description of the organisation:
Ceramica Dolomite, founded in 1965 in Trichiana (now Borgo Valbelluna) at the foot of the Belluno Dolomites, has always been an expression of “savoir faire” sanitary ceramic products, which combine the passion and know-how of our people with the most innovative and automated production technologies.
Constant attention to the evolution of design and product quality, as well as attention to customer service, has allowed us over the years to become a reference brand in the market for bathroom furniture and community products.
Today Ceramica Dolomite produces bathroom collections, laundry, kitchen and community items in its 130,000 sq. m. factory, 70,000 sq. m. of which are covered, fighting waste and recycling waste in full respect of the environment.

Product-related or management system-related certifications:
ISO 9001:2015 - Quality Management System
ISO 45001:2018 – Occupational Health and Safety Management System

Name and location of production site(s):
Ceramica Dolomite S.p.A., via Cavassico Inf. 160
32026 - Borgo Valbelluna (BL) - ITALY

Product information

Product name: Vitreous China Ceramic Sanitaryware

Product identification: This EPD covers multiple products of Vitreous China Ceramic Sanitaryware listed below:

- AGORDO
- ALBA
- DEMY
- GEMMA 2
- MADDALENA
- MAYKA
- MIA
- MIRTO NOEMI

Product description: The base material of the ceramic consists of natural materials: clay, kaolin, quartz, talk, silicate, soda and feldspar. These are poured into plaster or plastic molds (pressure casting process).

UN CPC code: 37210 Ceramic sinks, baths, water closet pans, flushing cisterns and similar sanitary fixtures.

Geographical scope: The geographical scope of this EPD is global.

LCA information

Functional unit / declared unit: 1 kg of medium Vitreous China (VC), packed and free of additional accessories (faucets, screws, plugs, etc.).

Reference service life: Unless there is a fracture or a glaze crack, a product can be used for more than 50 years without losing its hygienic and functional properties.

Time representativeness: LCA calculations were subject to client-specific data from 2023 and based on one-year averaged data.

Database(s) and LCA software used: Eco invent 3.10 and Sima Pro v. 9.6.0.1.

Description of system boundaries:
Cradle to gate with modules C1–C4, module D.

It covers A1-A3 product stages (Raw Material Supply, Transport and Manufacturing), C (End of Life) stages, and Module D.

A1: Raw material supply This module considers the extraction and processing of all raw materials, energy, and transportation which occur upstream to the studied manufacturing process.

Energy source behind Italy electricity mix used in the manufacturing process and its climate impact as kg CO_2 eq./kWh is reported below.

Information	Description	Quantity
Dataset	*Electricity, medium voltage {IT}| electricity, medium voltage, residual mix | Cut-off, U*	
Split of energy sources	Wind	0,43%
	Hydro&Marine	0,00%
	Geothermal	0,00%
	Biomass	0,63%
	Solar	6,21%
	Renewables unspecified	0,00%
	Lignite	0,05%
	Hard Coal	22,72%
	Gas	58,22%
	Oil	3,76%
	Fossil unspecified	3,57%
	Nuclear	4,40%
GWP-GHG	kg CO2 eq/kWh	0,759

A2: Transport (to the manufacturer) The raw materials are transported to the manufacturing site.

A3: Manufacturing This module includes all resources used during the production and waste produced. This also includes additives and packaging material.
The energy vector used is methane gas, capable of powering;
• cogenerator: the company is completely autonomous, able to cover 100% of its electricity needs through this technology;

• firing kilns: for the firing processes of raw ceramic bodies;
• boilers: for the generation of thermal energy for heating production environments and offices, for the portion that the cogenerator cannot cover.

C1: De-construction, Demolition This stage is assumed to be zero.

C2: Transport (Waste) This stage includes the transportation of the discarded products to final disposal. Average distance from demolition site to inert landfill site for final disposal is assumed to be 100 km.

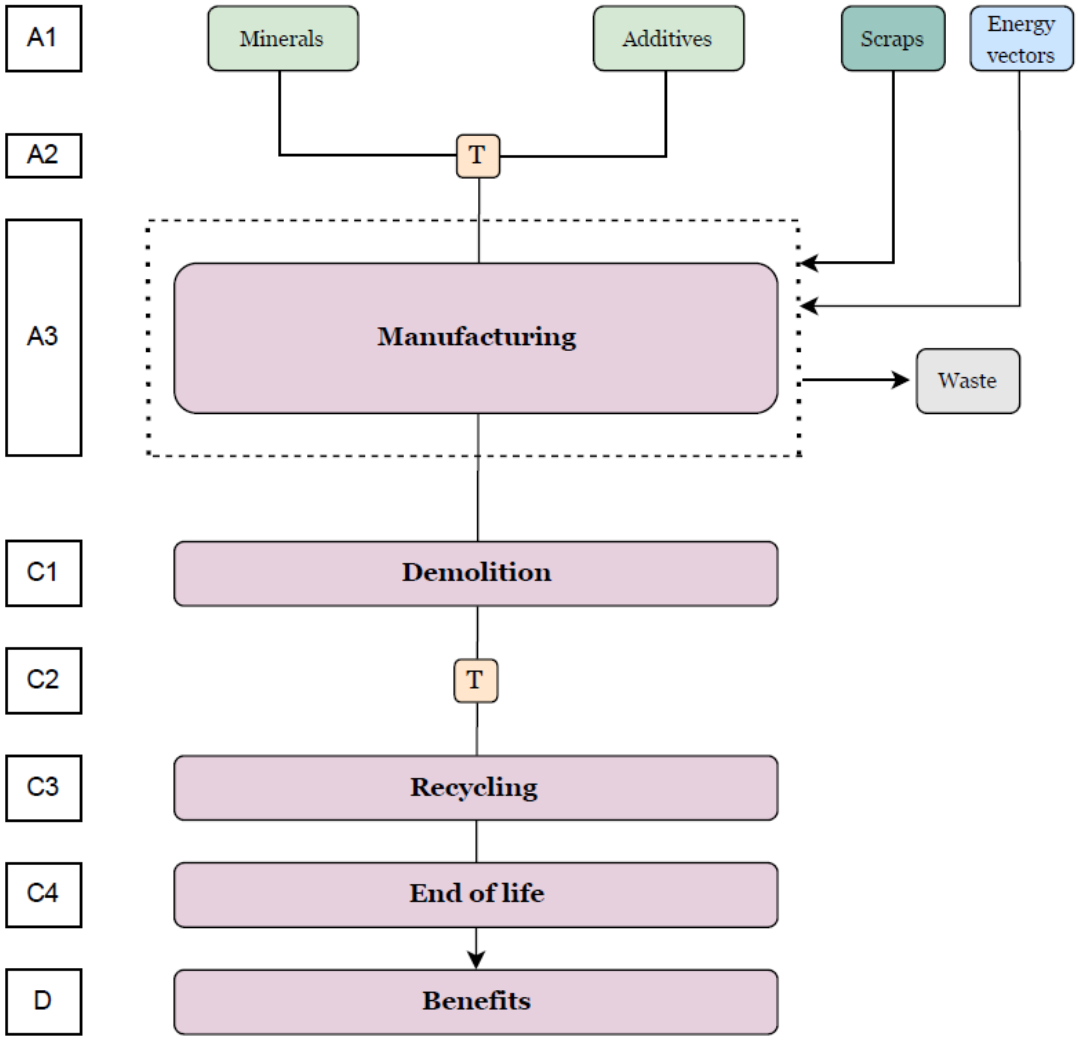
C3: Waste Processing This stage considers the recycling of inert wastes.

C4: Disposal Sanitary ceramic products at the end of life are disposed in inert landfills.

D: Benefit The benefit from recycling of sanitary ceramic waste and packaging is calculated in this section.

It should be noted that the following elements were not taken into consideration: the construction, mainteinance and decomissioning of infrastructure (i.e buildings); and the use of industrial land. It is believed that their impact on the declared unit is negligible.

System diagram:



Modules declared, geographical scope, share of specific data (in GWP-GHG results) and data variation (in GWP-GHG results):

	Product stage			Construction process stage		Use stage							End of life stage					Resource recovery stage
	Raw material supply	Transport	Manufacturing	Transport	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	X	X	X	X	X	X
Geography	EU	EU	IT	-	-	-	-	-	-	-	-	-	Global	Global	Global	Global		Global
Specific data used	87,46 %			-	-	-	-	-	-	-	-	-	-	-	-	-		-
Variation – products	5,39 %			-	-	-	-	-	-	-	-	-	-	-	-	-		-
Variation – sites	0 %			-	-	-	-	-	-	-	-	-	-	-	-	-		-

* “balancing-out reporting” of the biogenic CO_2 of packaging released in module A5 in module A1-A3.

Cut-off rules:

Data for elementary flows to and from the product system contributing to a minimum of 95% of the declared environmental impacts has been included.
Certain elementary flows have been excluded due to lack of reliable data:

- Production and use of molds due to their high number of reuses;
- Part of the plant waste non directly connected with the production, representing less than 1% in mass of total wastes;
- Auxiliary materials.

Allocation methods:

The allocation methods applied in the core module, to associate the elementary flows with the functional unit under study, are based on physical relationship (mass criterion).

Content information

Product components	Weight, %	Post-consumer material, weight-%	Biogenic material, weight-% and kg C/kg
Clay	52-53	0	0
Quartz	18-19	0	0
Feldspar	28-29	0	0
Pitcher	< 1	0	0
Talk	< 1	0	0
Silicate	< 1	0	0
Additive	< 1	0	0
Packaging materials	**Weight, %**	**Weight-% (versus the product)**	**Weight biogenic carbon, kg C/kg**
Cardboard	8-9	5	0,4502
Wooden strip	28-29	16,4	0,4940
Wooden pallet	62-63	35,6	14,1192
Polystyrene	< 1	0,0	0
Shrink wrapped	< 1	0,1	0
TOTAL		57,1	

REACH REGULATION

No substances included in the Candidate List of Substances of Very High Concern for authorization under the REACH regulations are present in this product either above the threshold for registration with the European Chemicals Agency or above 0.1% (wt/wt).

Results of the environmental performance indicators

It is discouraging the use of the results of modules A1-A3 without considering the results of module C. 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.

The 2.0 version of the impact categories, as delineated in the designated section of ww.environdec.it, is employed. This version incorporates the primary indicators of the EN 15804:202+A2:2019/AC:2021 standard, along with the characterization factors derived from the EF 3.1 method (February 2023).

Mandatory impact category indicators according to EN 15804

Indicator	Unit	A1-A3	C1	C2	C3	C4	D
GWP-total	kg CO_2 eq.	**5,39E+00**	0,00E+00	1,94E-02	0,00E+00	1,45E-03	-1,02E-01
GWP-b	kg CO_2 eq.	**5,38E+00**	0,00E+00	1,94E-02	0,00E+00	1,44E-03	-9,94E-02
GWP-F	kg CO_2 eq.	**5,32E-03**	0,00E+00	3,47E-06	0,00E+00	4,18E-06	-1,25E-03
GWP-L	kg CO_2 eq.	**2,85E-03**	0,00E+00	6,33E-06	0,00E+00	4,70E-07	-1,03E-03
ODP	kg CFC 11 eq.	**1,26E-07**	0,00E+00	3,85E-10	0,00E+00	4,27E-11	-2,35E-09
AP	mol H^+ eq.	**1,03E-02**	0,00E+00	6,06E-05	0,00E+00	1,58E-05	-3,44E-04
EP-f	kg P eq.	**3,69E-04**	0,00E+00	1,29E-06	0,00E+00	2,37E-06	-1,33E-05
EP-m	kg N eq.	**3,04E-03**	0,00E+00	2,04E-05	0,00E+00	3,93E-06	-1,39E-04
EP-t	mol N eq.	**3,21E-02**	0,00E+00	2,22E-04	0,00E+00	4,22E-05	-1,17E-03
POCP	kg NMVOC eq.	**1,60E-02**	0,00E+00	9,49E-05	0,00E+00	1,53E-05	-5,10E-04
ADP m	kg Sb eq.	**1,03E-05**	0,00E+00	6,19E-08	0,00E+00	2,87E-09	-3,02E-07
ADP-f	MJ	**5,15E+00**	0,00E+00	2,23E-02	0,00E+00	2,39E-03	-2,29E-01
WDP*	m^3	**7,62E-01**	0,00E+00	1,11E-03	0,00E+00	-1,91E-02	-6,09E-02
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: 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 and voluntary impact category indicators

Indicator	Unit	A1-A3	C1	C2	C3	C4	D
GWP-GHG[1]	kg CO_2 eq.	**5,39E+00**	0,00E+00	1,94E-02	0,00E+00	1,45E-03	-1,02E-01

Additional voluntary indicators e.g. the voluntary indicators from EN 15804 or the global indicators according to ISO 21930:2017

Resource use indicators

Indicator	Unit	A1-A3	C1	C2	C3	C4	D
PERE	MJ	**1,85E+01**	0,00E+00	4,45E-03	0,00E+00	6,09E-04	-7,86E+00
PERM	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	**1,85E+01**	0,00E+00	4,45E-03	0,00E+00	6,09E-04	-7,86E+00
PENRE	MJ	**7,90E+01**	0,00E+00	2,72E-01	0,00E+00	3,30E-02	-1,28E+00
PENRM	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	**7,90E+01**	0,00E+00	2,72E-01	0,00E+00	3,30E-02	-1,28E+00
SM	kg	**4,16E-03**	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
NRSF	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	m^3	**1,94E-02**	0,00E+00	3,54E-05	0,00E+00	-4,21E-04	-1,72E-03

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

Waste indicators

Indicator	Unit	A1-A3	C1	C2	C3	C4	D
Hazardous waste disposed	kg	**4,19E-04**	0,00E+00	1,83E-06	0,00E+00	2,23E-07	-7,95E-06
Non-hazardous waste disposed	kg	**1,23E+00**	0,00E+00	1,29E-02	0,00E+00	1,40E-01	-7,68E-03
Radioactive waste disposed	kg	**2,26E-05**	0,00E+00	8,66E-08	0,00E+00	9,90E-09	-1,66E-06

Output flow indicators

Indicator	Unit	A1-A3	C1	C2	C3	C4	D
Components for re-use	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

References

- General Programme Instructions of the International EPD® System. Version 4.0.
- PCR 2019:14 Construction Products, Version 1.3.4
- EN15804-A2:2019/ Sustainability of construction works – Environmental Product Declarations — Core rules for the product category of construction products
- ISO 14020:2000/ Environmental labels and declarations — General principles
- ISO 14025/ ISO 14025:2006 Preview Environmental labels and declarations -- Type III environmental declarations -- Principles and procedures
- ISO 14040-44/ ISO 14040:2006-10, Environmental management - Life cycle assessment - Principles and framework (ISO 14040:2006) and Requirements and guidelines (ISO 14044:2006)
- LCAReport_CeramicaDolomite_rev0.2

CERAMICA DOLOMITE

EPD®

www.environdec.com

Environmental Product Declaration

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

Sanitary ceramic products with Fine Fire Clay mixture

from

Ceramica Dolomite S.p.A.

EPD of multiple products, based on the average results of the product group

Programme:	The International EPD® System, www.environdec.com
Programme operator:	EPD International AB
EPD registration number:	EPD-IES-0005340
Publication date:	2025-03-26
Valid until:	2030-03-25

An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at www.environdec.com

General information

Programme information

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

Accountabilities for PCR, LCA and independent, third-party verification
Product Category Rules (PCR)
CEN standard EN 15804 serves as the Core Product Category Rules (PCR)
Product Category Rules (PCR): PCR 2019:14 Construction products and construction services, version 1.3.4.
PCR review was conducted by: The Technical Committee of the International EPD® System. Review chair: Claudia A. Peña, University of Concepción, Chile. A full list of members available on www.environdec.com.
Life Cycle Assessment (LCA)
LCA accountability: Tecno ESG s.r.l. (www.tecnoesg.it) and Spin Life s.r.l. (www.spinlife.it)
Third-party verification
Independent third-party verification of the declaration and data, according to ISO 14025:2006, via: ☐ EPD verification by individual verifier ☒ EPD verification by accredited certification body Third-party verification: *Bureau Veritas Italia S.p.A.* is an approved certification body accountable for the third-party verification (Accreditation number 009VV)
Procedure for follow-up of data during EPD validity involves third party verifier: ☐ Yes ☒ No

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

EPDs within the same product category but registered in different EPD programmes, or not compliant with EN 15804, may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same version number) or be based on fully-aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterisation factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.

Company information

Owner of the EPD: Ceramica Dolomite S.p.A.

Contact: Alessandro Moretto (alessandro.moretto@ceramicadolomite.it)

Description of the organisation:
Ceramica Dolomite, founded in 1965 in Trichiana (now Borgo Valbelluna) at the foot of the Belluno Dolomites, has always been an expression of “savoir faire” sanitary ceramic products, which combine the passion and know-how of our people with the most innovative and automated production technologies.
Constant attention to the evolution of design and product quality, as well as attention to customer service, has allowed us over the years to become a reference brand in the market for bathroom furniture and community products.
Today Ceramica Dolomite produces bathroom collections, laundry, kitchen and community items in its 130,000 sq. m. factory, 70,000 sq. m. of which are covered, fighting waste and recycling waste in full respect of the environment.

Product-related or management system-related certifications:
ISO 9001:2015 - Quality Management System
ISO 45001:2018 – Occupational Health and Safety Management System

Name and location of production site(s):
Ceramica Dolomite S.p.A., via Cavassico Inf. 160
32026 - Borgo Valbelluna (BL) - ITALY

Product information

Product name: Fine Fire Clay Ceramic Sanitaryware

Product identification: This EPD covers multiple products of Fine Fire Clay Ceramic Sanitaryware listed below:

- ALBA
- DEMY
- EURO
- GEMMA 2
- KENIA
- MAYKA
- MESSICO
- MIA
- MIRTO
- OLTRE
- PERSIA
- REVINE
- SQUASH
- VIRGINIA

Product description:
The base material of the ceramic consists of natural materials: clay, kaolin, quartz, talk, silicate, soda and feldspar. These are poured into plaster or plastic molds (pressure casting process).

UN CPC code: 37210 Ceramic sinks, baths, water closet pans, flushing cisterns and similar sanitary fixtures.

Geographical scope:
The geographical scope of this EPD is global.

LCA information

Functional unit / declared unit: 1 kg of medium Fine Fire Clay (FFC), packed and free of additional accessories (faucets, screws, plugs, etc.).

Reference service life: Unless there is a fracture or a glaze crack, a product can be used for more than 50 years without losing its hygienic and functional properties.

Time representativeness: LCA calculations were subject to client-specific data from 2023 and based on one-year averaged data

Database(s) and LCA software used: Ecoinvent 3.10 and Sima Pro v. 9.6.0.1

Description of system boundaries:
Cradle to gate with modules C1–C4, module D.

A1: Raw material supply This module considers the extraction and processing of all raw materials, energy, and transportation which occur upstream to the studied manufacturing process.

Energy source behind Italy electricity mix used in the manufacturing process and its climate impact as kg CO_2 eq./kWh is reported below.

Information	Description	Quantity
Dataset	*Electricity, medium voltage {IT}| electricity, medium voltage, residual mix | Cut-off, U*	
Split of energy sources	Wind	0,43%
	Hydro&Marine	0,00%
	Geothermal	0,00%
	Biomass	0,63%
	Solar	6,21%
	Renewables unspecified	0,00%
	Lignite	0,05%
	Hard Coal	22,72%
	Gas	58,22%
	Oil	3,76%
	Fossil unspecified	3,57%
	Nuclear	4,40%
GWP-GHG	kg CO2e/kWh	0,759

A2: Transport (to the manufacturer) The raw materials are transported to the manufacturing site.
A3: Manufacturing This module includes all resources used during the production and waste produced. This also includes additives and packaging material.
The energy vector used is methane gas, capable of powering;
• cogenerator: the company is completely autonomous, able to cover 100% of its electricity needs through this technology;

• firing kilns: for the firing processes of raw ceramic bodies;
• boilers: for the generation of thermal energy for heating production environments and offices, for the portion that the cogenerator cannot cover.

C1: De-construction, Demolition This stage is assumed to be zero.

C2: Transport (Waste) This stage includes the transportation of the discarded products to final disposal. Average distance from demolition site to inert landfill site for final disposal is assumed to be 100 km.

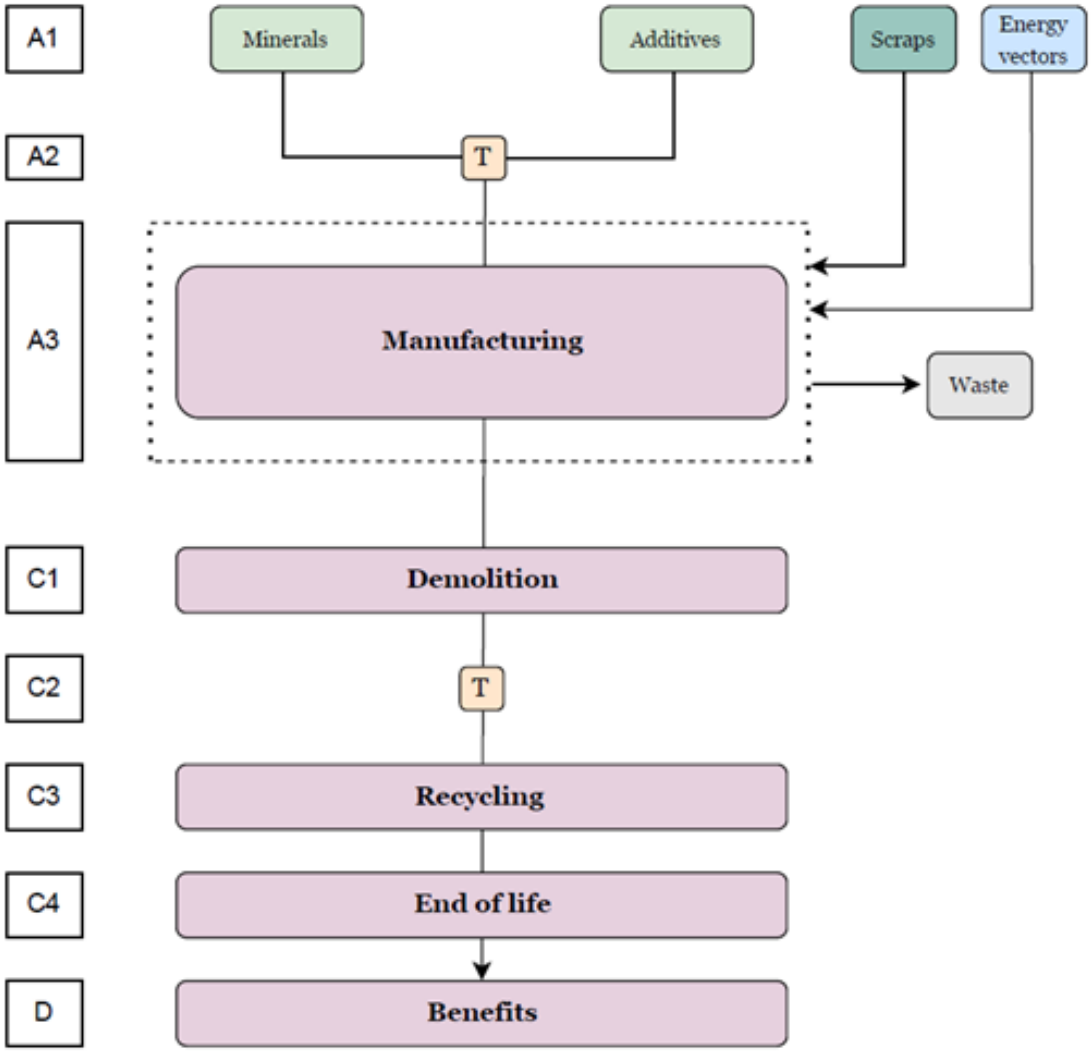
C3: Waste Processing This stage considers the recycling of inert wastes.

C4: Disposal Sanitary ceramic products at the end of life are disposed in inert landfills.

D: Benefit The benefit from recycling of sanitary ceramic waste and packaging is calculated in this section.

It should be noted that the following elements were not taken into consideration: the construction, mainteinance and decomissioning of infrastructure (i.e buildings); and the use of industrial land. It is believed that their impact on the declared unit is negligible.

System diagram:



Modules declared, geographical scope, share of specific data (in GWP-GHG results) and data variation (in GWP-GHG results):

	Product stage			Construction process stage		Use stage							End of life stage				Resource recovery stage
	Raw material supply	Transport	Manufacturing	Transport	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	X	X	X	X	X
Geography	EU	EU	IT	-	-	-	-	-	-	-	-	-	Globa	Global	Globa	Global	Global
Specific data used	86,56 %			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	4,43 %			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	0 %			-	-	-	-	-	-	-	-	-	-	-	-	-	-

* “balancing-out reporting” of the biogenic CO_2 of packaging released in module A5 in module A1-A3.

Cut-off rules:

Data for elementary flows to and from the product system contributing to a minimum of 95% of the declared environmental impacts has been included.
Certain elementary flows have been excluded due to lack of reliable data:

- Production and use of molds due to their high number of reuses;
- Part of the plant waste non directly connected with the production, representing less than 1% in mass of total wastes;
- Auxiliary materials.

Allocation methods:

The allocation methods applied in the core module, to associate the elementary flows with the functional unit under study, are based on physical relationship (mass criterion).

Content information

Product components	Weight, %	Post-consumer material, weight-%	Biogenic material, weight-% and kg C/kg
Clay	39-40	0	0
Quartz	12-13	0	0
Pitcher	17-18	0	0
Chamotte	29-30	0	0
Silicate	< 1	0	0
Additive	< 1	0	0
Packaging materials	**Weight, %**	**Weight-% (versus the product)**	**Weight biogenic carbon, kg C/kg**
Cardboard	11	4,7	0,4502
Wooden strip	8-9	3,5	0,4940
Wooden pallet	80-81	34,2	14,1192
Polystyrene	<1	0,0	0
Shrink wrapped	<1	0,1	0
TOTAL		42,5	

REACH REGULATION

No substances included in the Candidate List of Substances of Very High Concern for authorization under the REACH regulations are present in this product either above the threshold for registration with the European Chemicals Agency or above 0.1% (wt/wt).

Results of the environmental performance indicators

It is discouraging the use of the results of modules A1-A3 without considering the results of module C. 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.

The 2.0 version of the impact categories, as delineated in the designated section of ww.environdec.it, is employed. This version incorporates the primary indicators of the EN 15804:202+A2:2019/AC:2021 standard, along with the characterization factors derived from the EF 3.1 method (February 2023).

Mandatory impact category indicators according to EN 15804

Indicator	Unit	A1-A3	C1	C2	C3	C4	D
GWP-total	kg CO_2 eq.	**4,12E+00**	0,00E+00	1,94E-02	0,00E+00	1,45E-03	-1,02E-01
GWP-b	kg CO_2 eq.	**4,11E+00**	0,00E+00	1,94E-02	0,00E+00	1,44E-03	-9,94E-02
GWP-F	kg CO_2 eq.	**4,17E-03**	0,00E+00	3,47E-06	0,00E+00	4,18E-06	-1,25E-03
GWP-L	kg CO_2 eq.	**2,18E-03**	0,00E+00	6,33E-06	0,00E+00	4,70E-07	-1,03E-03
ODP	kg CFC 11 eq.	**9,66E-08**	0,00E+00	3,85E-10	0,00E+00	4,27E-11	-2,35E-09
AP	mol H^+ eq.	**6,81E-03**	0,00E+00	6,06E-05	0,00E+00	1,58E-05	-3,44E-04
EP-f	kg P eq.	**4,08E-05**	0,00E+00	1,49E-07	0,00E+00	6,06E-08	-1,33E-05
EP-m	kg N eq.	**2,02E-03**	0,00E+00	2,02E-05	0,00E+00	3,90E-06	-1,39E-04
EP-t	mol N eq.	**2,19E-02**	0,00E+00	2,22E-04	0,00E+00	4,22E-05	-1,17E-03
POCP	kg NMVOC eq.	**1,16E-02**	0,00E+00	9,49E-05	0,00E+00	1,53E-05	-5,10E-04
ADP m	kg Sb eq.	**6,80E-06**	0,00E+00	6,19E-08	0,00E+00	2,87E-09	-3,02E-07
ADP-f	MJ	**3,41E+00**	0,00E+00	2,23E-02	0,00E+00	2,39E-03	-2,29E-01
WDP*	m^3	**1,13E+00**	0,00E+00	1,11E-03	0,00E+00	-1,91E-02	-6,09E-02
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: 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 and voluntary impact category indicators

Indicator	Unit	A1-A3	C1	C2	C3	C4	D
GWP-GHG[1]	kg CO_2 eq.	**4,12E+00**	0,00E+00	1,94E-02	0,00E+00	1,45E-03	-1,02E-01

Additional voluntary indicators e.g. the voluntary indicators from EN 15804 or the global indicators according to ISO 21930:2017

Resource use indicators

Indicator	Unit	A1-A3	C1	C2	C3	C4	D
PERE	MJ	**1,46E+01**	0,00E+00	4,45E-03	0,00E+00	6,09E-04	-7,86E+00
PERM	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	**1,46E+01**	0,00E+00	4,45E-03	0,00E+00	6,09E-04	-7,86E+00
PENRE	MJ	**6,05E+01**	0,00E+00	2,72E-01	0,00E+00	3,30E-02	-1,28E+00
PENRM	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	**6,05E+01**	0,00E+00	2,72E-01	0,00E+00	3,30E-02	-1,28E+00
SM	kg	**2,61E-01**	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
NRSF	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	m^3	**2,77E-02**	0,00E+00	3,54E-05	0,00E+00	-4,21E-04	-1,72E-03

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

Waste indicators

Indicator	Unit	A1-A3	C1	C2	C3	C4	D
Hazardous waste disposed	kg	**3,14E-04**	0,00E+00	1,83E-06	0,00E+00	2,23E-07	-7,95E-06
Non-hazardous waste disposed	kg	**7,75E-01**	0,00E+00	1,29E-02	0,00E+00	1,40E-01	-7,68E-03
Radioactive waste disposed	kg	**1,62E-05**	0,00E+00	8,66E-08	0,00E+00	9,90E-09	-1,66E-06

Output flow indicators

Indicator	Unit	A1-A3	C1	C2	C3	C4	D
Components for re-use	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy	MJ	**0,00E+00**	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

References

- General Programme Instructions of the International EPD® System. Version 4.0.
- PCR 2019:14 Construction Products, Version 1.3.4
- EN15804-A2:2019/ Sustainability of construction works – Environmental Product Declarations — Core rules for the product category of construction products
- ISO 14020:2000/ Environmental labels and declarations — General principles
- ISO 14025/ ISO 14025:2006 Preview Environmental labels and declarations -- Type III environmental declarations -- Principles and procedures
- ISO 14040-44/ ISO 14040:2006-10, Environmental management - Life cycle assessment - Principles and framework (ISO 14040:2006) and Requirements and guidelines (ISO 14044:2006)
- LCAReport_CeramicaDolomite_rev0.2

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