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EPD
INTERNATIONAL EPD SYSTEM

ECO PLATFORM
EPD
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# ENVIRONMENTAL PRODUCT DECLARATION
## in ACCORDANCE WITH ISO 14025:2010 and EN 15804:2012+A2:2019/AC:2021



# MARBLE SLAB FROM “BETTOGLI” QUARRY, 2 AND 3 CM THICKNESS
## EPD of multiple products, based on a representative product


Revision: 2025-11-17 (Versione 6)
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Programme operator: EPD International AB


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

english



He foretold their monumental future to the shapeless heaps of stones and beams that lay around us; and those materials, at his voice, seemed dedicated to the one and only place to which the fates propitious to the goddess would have assigned them.

"Eupalinos: Or, The Architect"

*Paul Valèry*

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# Summary


General information ..... 5
Company profile ..... 7
Mission ..... 9
The culture of marble ..... 11

The quarry NERA BETTOGLI 68B ..... 13
Product description ..... 15
*Content declaration ..... 15*
*Biogenic Carbon ..... 15*
System boundary ..... 17
Production (A1-A3) ..... 19
End of life (C1-C2-C3-C4) ..... 21
Cut off ..... 21
Data quality declaration ..... 23

Environmental performance ..... 24
Production stages (A1-A3) ..... 24
Resource consumption ..... 26
Waste ..... 28
Additional indicator ..... 28

Acronyms ..... 31
Verification and registration ..... 33
References ..... 34
Contact information ..... 35



HEART
MIND
IDEAS

Stone does not age on a human scale, instead time only makes it more fascinating, and in our Bel Paese one must only have a look around to realize this.

Stone at its essence is a project, stone is about evolution; moving forward… heart, mind, and ideas.

Environmental product declaration in accordance with ISO 14025:2010 and EN 15804:2012+A2:2019/AC:2021

# General information

| | |
|---|---|
| EPD PROGRAMME | The International EPD® System • www.environdec.com |
| ADDRESS<br>Website<br>E-mail | Box 210 60, SE-100 31 Stockholm, Sweden - EPD International AB<br>www.environdec.com<br>support@environdec.com |
| PRODUCT CATEGORY RULES (PCR) | CEN standard EN 15804 serves as the Core Product Category Rules (PCR)<br>International EPD System - PCR 2019:14 - "Construction product" Version 2.0.1<br>PCR review was conducted by: The Technical Committee of the International EPD System.<br>The review panel may be contacted via support@environdec.com<br>Chairs of the PCR review: Rob Rouwette (chair), Noa Meron (co-chair). |
| EPD PREPARED BY | Ing. Carlo Grassi, Dr. Jonatha Trabucco |
| OWNER OF THE DECLARATION | FRANCHI UMBERTO MARMI S.p.A. - Carrara (MS) - via del Bravo 14 - ITALY |
| WEBSITE | www.fum.it |
| Third-party Verification | Independent third-party verification of the declaration and data, according to ISO 14025:2006, via:<br>☑ **Individual EPD verification without a pre-verified LCA/EPD tool** |
| Third-party verifier | DNV Business Assurance Italia S.r.l. (via Energy park, 14 – 20871 Vimercate - Italy)<br>Accredited by: ACCREDIA (accreditation number 00010VV)<br>Procedure for follow-up of data during EPD validity involves third party verifier: ☐ Yes ☑ No |
| UN CPC CODE | 151 Monumental and building stone<br>15120 "Marble and other calcareous monumental or building stone" |
| GEOGRAPHICAL SCOPE | International |
| EPD REGISTRATION NUMBER | S-P-02321 |
| APPROVAL DATE | 2020-09-29 |
| VALID UNTIL | 2030-09-28 |
| PRODUCT DESCRIPTION | Marble slabs, 2 and 3 cm thick from Apuan district (Bettogli quarry) |
| APPLICATIONS | Use in architecture and construction for flooring or cladding |
| SCOPE OF APPLICATION OF THE LCA | The LCA analysis was carried out according to the ISO 14025, ISO 14040, ISO 14044 and EN 15804 standards. Both specific data from the production process and data from the Ecoinvent 3.10 database were used. Life cycle impact assessment methods used:<br>core environmental impact indicators of EN 15804:2012+A2:2019/AC:2021.<br>The characterisation factors (CF) are based on version 3.1 of the reference package for CFs used in the PEF framework (EF 3.1). LCA performed with OpenLCA software version 2.4.1<br>LCA study covers the production phases of raw materials and energy; transport of materials; production at company sites; the end of life of the material. The declared unit is 1 m of processed marble slab from the quarry called "Bettogli B" of different thicknesses:<br>• Bettogli 2 cm • Bettogli 3 cm |

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

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. For further information about comparability, see EN 15804 and ISO 14025.

50
1971 · 2021
ANNIVERSARY



Environmental product declaration in accordance with ISO 14025:2010 and EN 15804:2012+A2:2019/AC:2021

# Company profile

The story of Franchi Umberto Marmi began 50 years ago, in 1971, when a man's creative thinking brought life to an entity that still today relies on the immeasurable value of sharing.

Sculpted day after day with profound determination, almost as if it were itself a block of marble, the company has come to represent the world of beauty and exclusivity of this incredible natural stone.
Franchi Umberto Marmi is part of a single district of Carrara and a continuously growing and highly competitive excellence.
Every day over 40 employees contribute to the dissemination of the culture of this precious natural stone, authentic expression of "Made in Italy" in the world.

Franchi Umberto Marmi covers all stages of the production and distribution process, thus ensuring the absolute quality of the product, whether it is slabs or entire blocks.

The activity is mainly centered within the 59,000 square meters of the Carrara headquarters, which make the company the largest exhibition space dedicated to Carrara marble.
Here, the classic majesty of the spaces meets the functionality of innovative management.

A perfect balance that has always inspired Franchi Umberto Marmi's business strategy.


ranchiumbertomarmi

# Mission

Franchi Umberto Marmi operates according to the modern and ancient company vision that puts the man, employee or customer, in the foreground, combining all this with the philosophy of continuous improvement and courageous change, putting new materials and new ideas on the market.

The company offers customer assistance and care, ready to solve any problem. Different projects in different locations in the world, different needs, need for different symbols, all dealt with our means, people and absolute professionalism.

Following this conception, the company intends to operate on the market following these corporate values:

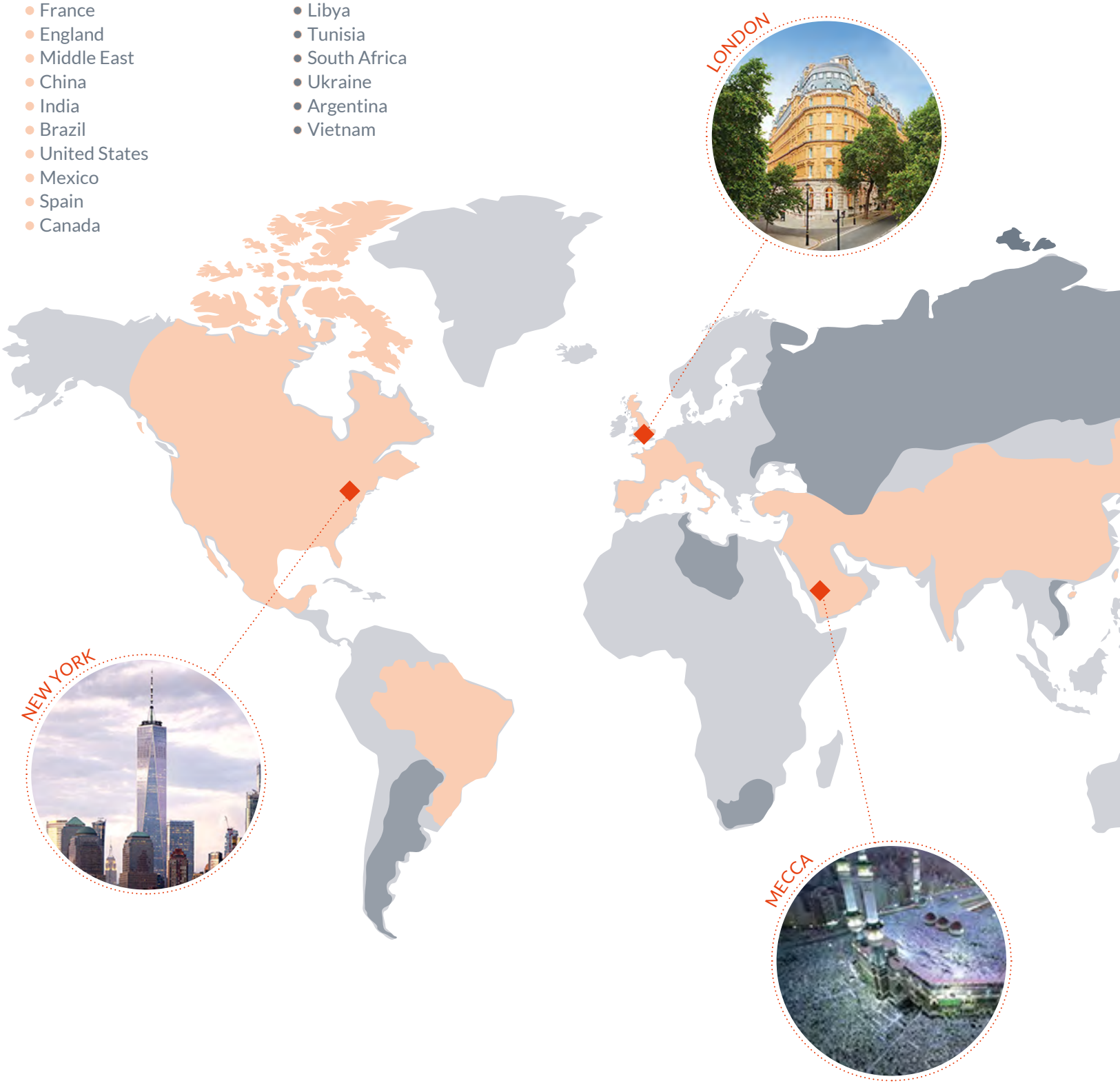
- customer satisfaction
- honesty and transparency
- excellence
- creation of value
- passion
- flexibility and dynamism
- teamwork
- respect
- trust
- growth and development
- sense of family and sense of belonging to the team
- tradition and innovation

## Export markets

- Italy
- France
- England
- Middle East
- China
- India
- Brazil
- United States
- Mexico
- Spain
- Canada

## Expanding markets

- Russia
- Libya
- Tunisia
- South Africa
- Ukraine
- Argentina
- Vietnam



# The culture of marble



Franchi Umberto Marmi is committed to bringing the culture of marble, as a culture of the city of Carrara, all over the world and in the most prestigious places.The company wants to spread the message of the beauty of the material that nature offers us to carry out the most important projects, promoting the concrete sense of value, elegance and excellence that marble brings with its use.

It has supplied the marbles that characterize prestigious projects such as:

- Tower One project of the World Trade Center
- New wing of Mecca in Jeddah
- Ebury Square Corinthia Hotel in London
- 220 Central Park and Park Avenue 1010 in New York
- Numerous Yves Saint Laurent stores

Added to this is the company's desire to achieve ever better organizational levels.
In this direction Franchi Umberto Marmi has equipped itself with a STANDARD MANAGEMENT SYSTEM COMPLIANT:

EPD

ISO-45001 2018

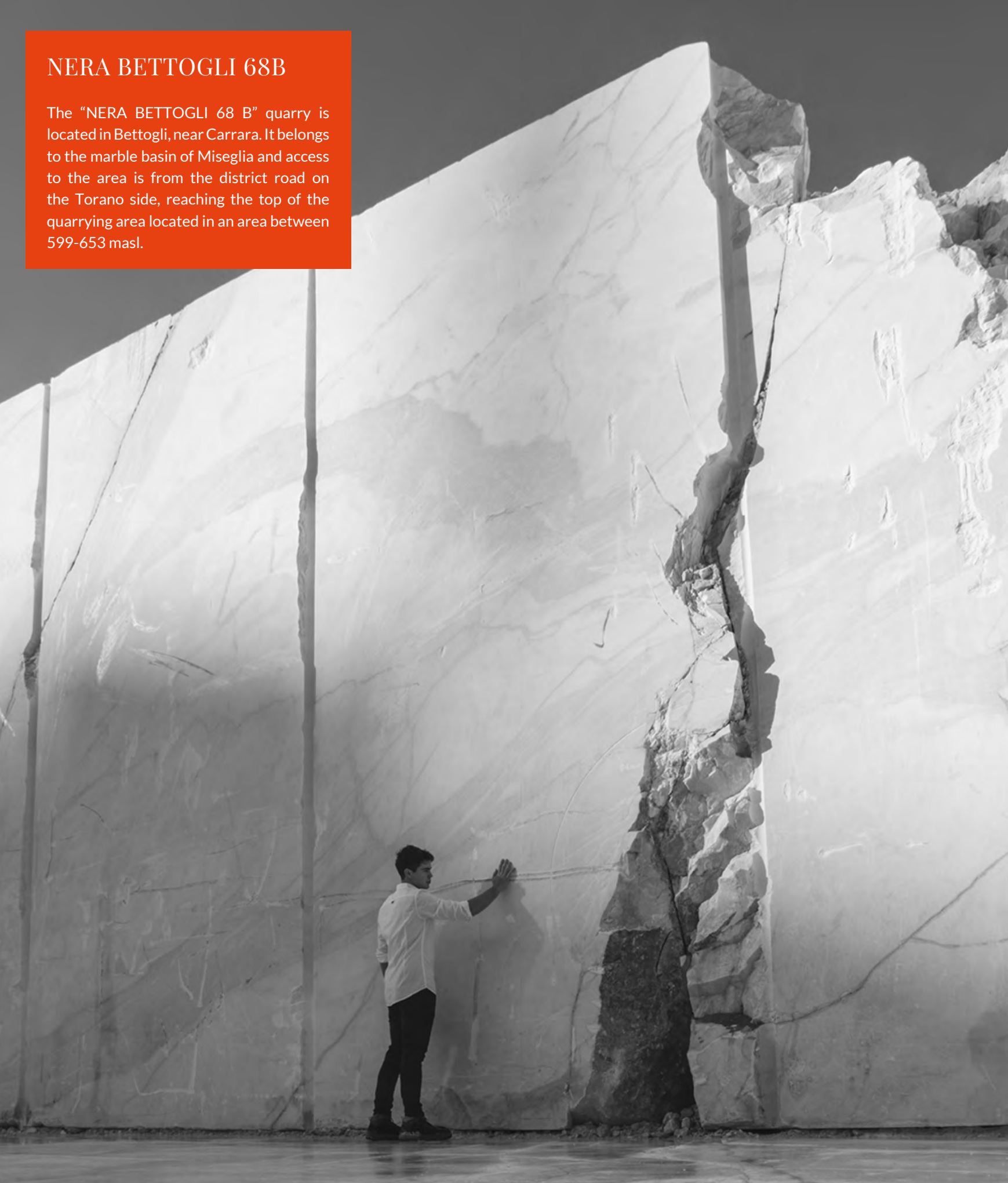
ISO-14001 2015

ISO-9001 2015

2019 AWARD FOR EXHIBITORS AT THE FAIR
BEST COMMUNICATOR AWARD BY MARMOMACC

# NERA BETTOGLI 68B

The “NERA BETTOGLI 68 B” quarry is located in Bettogli, near Carrara. It belongs to the marble basin of Miseglia and access to the area is from the district road on the Torano side, reaching the top of the quarrying area located in an area between 599-653 masl.



# The quarry-NERA BETTOGLI 68B



BETTOGLI MARMI was founded in 1987; already at that date the quarry was in the company availability, due to a historic acquisition of 1948 completed in several steps, with the acquisition of the last areas in 2008.
Currently, BETTOGLI MARMI has a mining area extending approximately 124,000 square meters in total.
The areas covered by the excavation project extend over an area of about 23'000 square meters.
The authorized project involves a single phase, developed on different levels, with the "descending step" exploitation technique.

QUARRY'S PRODUCTION SYSTEM

- extraction of large-sized material from the mountain
- cutting of the material extracted into smaller pieces
- final handling and marketing of the finished product (squared and shapeless blocks)

QUARRYING OPERATIONS

- traditional methodology used in the stone area
- horizontal and vertical cuts made with cutting machines
- removal of banks with mechanical handling equipement

MATERIALS EXTRACTED

- marbles of various precious qualities, the so-called "colored marbles"

CAVA BETTOGLI 68B
ISO 14001 and ISO 45001 CERTIFIED

LONG-TERM PRODUCTION OF:
Statuary marble, Calacatta marble, Cremo marble, Cipollino marble, White Zebrino marble, Black Zebrino marble



Environmental product declaration in accordance with ISO 14025:2010 and EN 15804:2012+A2:2019/AC:2021

# Product description

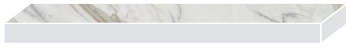


The analyzed product is 1 $m^2$ of manufactured marble of varying thickness, for buildings and construction works:

Bettogli marble slab (thickness 2 cm);
Bettogli marble slab (thickness 3 cm).

| PHYSICAL CHARACTERISTICS | UNIT OF MEASURE | BETTOGLI MARBLE |
|---|---|---|
| Compression breaking load | $Kg/cm^2$ | 1173 |
| Breaking load after freezing | $Kg/cm^2$ | 1097 |
| Unitary bending tensile strength | $Kg/cm^2$ | 194 |
| Thermal expansion coefficient | mm/m°C | 0,0027 |
| Water imbibition coefficient | % | 0,11 |
| Impact resistance | cm | 61 |
| Weight per unit of volume | $Kg/m^3$ | 2700 |

Classification according to the UN CPC code: 151 Monumental and building stone, in particular (15120 “Marble and other calcareous monumental or building stone”).



3 cm



2 cm

The product contains no hazardous substances and no substances of very high concern (SVHC) on the REACH Candidate List/ published by the European Chemicals Agency in a concentration more than 0,1% (by unit weight).

## *Content declaration*

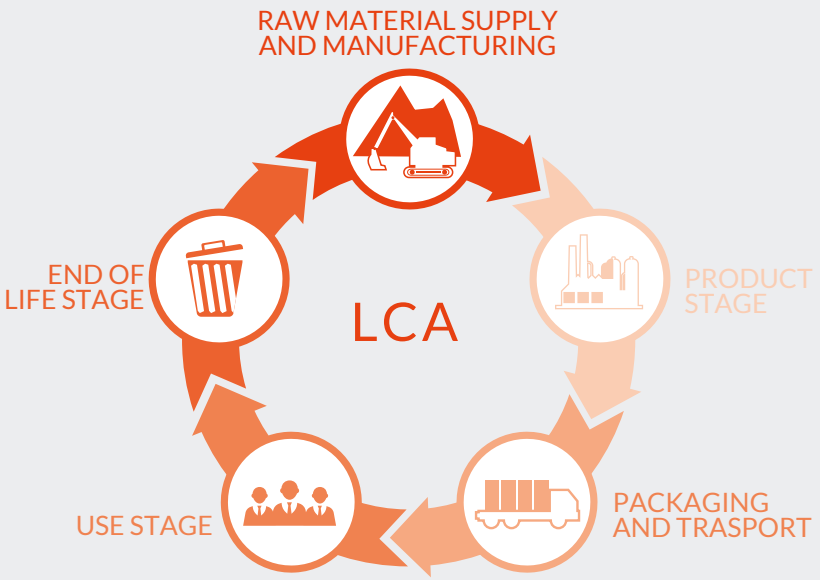
| PRODUCT CONTENT | Kg /d.u. |
|---|---|
| Marble | 54 |
| PACKAGING MATERIALS | |
| Wood | 0,503 |
| BIOGENIC CARBON CONTENT | Kg C/d.u. |
| Biogenic Carbon content in product | 0 |
| Biogenic Carbon content in accompanying packaging | 0,251 |

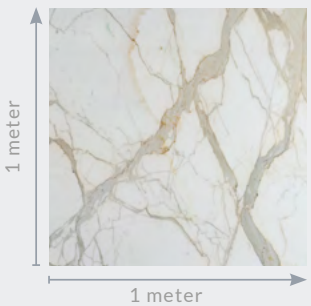
## *Biogenic carbon*

Sequestred biogenic carbon stocked in the packaging in module A1 is balanced in module A3, where the packaging leaves the product system.

The EPD is a declaration of the environmental performance of a product or service: this declaration follows the voluntary certification scheme of ISO14025 standard. The EPD is an evaluation and communication tool for environmental performance of a product (or service), based on the use of LCA methodologies (Life Cycle Assessment).

The methodology that forms the technical basis for a wide range of feasibleactions aimed at increasing the sustainability of products, since helps to understand the impact generated on the environment by the products.




For this EPD, in accordance with the reference standards, the concept of "declared unit" is used, instead of "functional unit".

## DECLARED UNIT

1 $m^2$ of worked marble slab from the quarry called "Bettogli B" with thicknesses of 2 cm.

## REFERENCE YEAR

The data used refer to the calendar year 2024.
Study carried out in the year 2025.

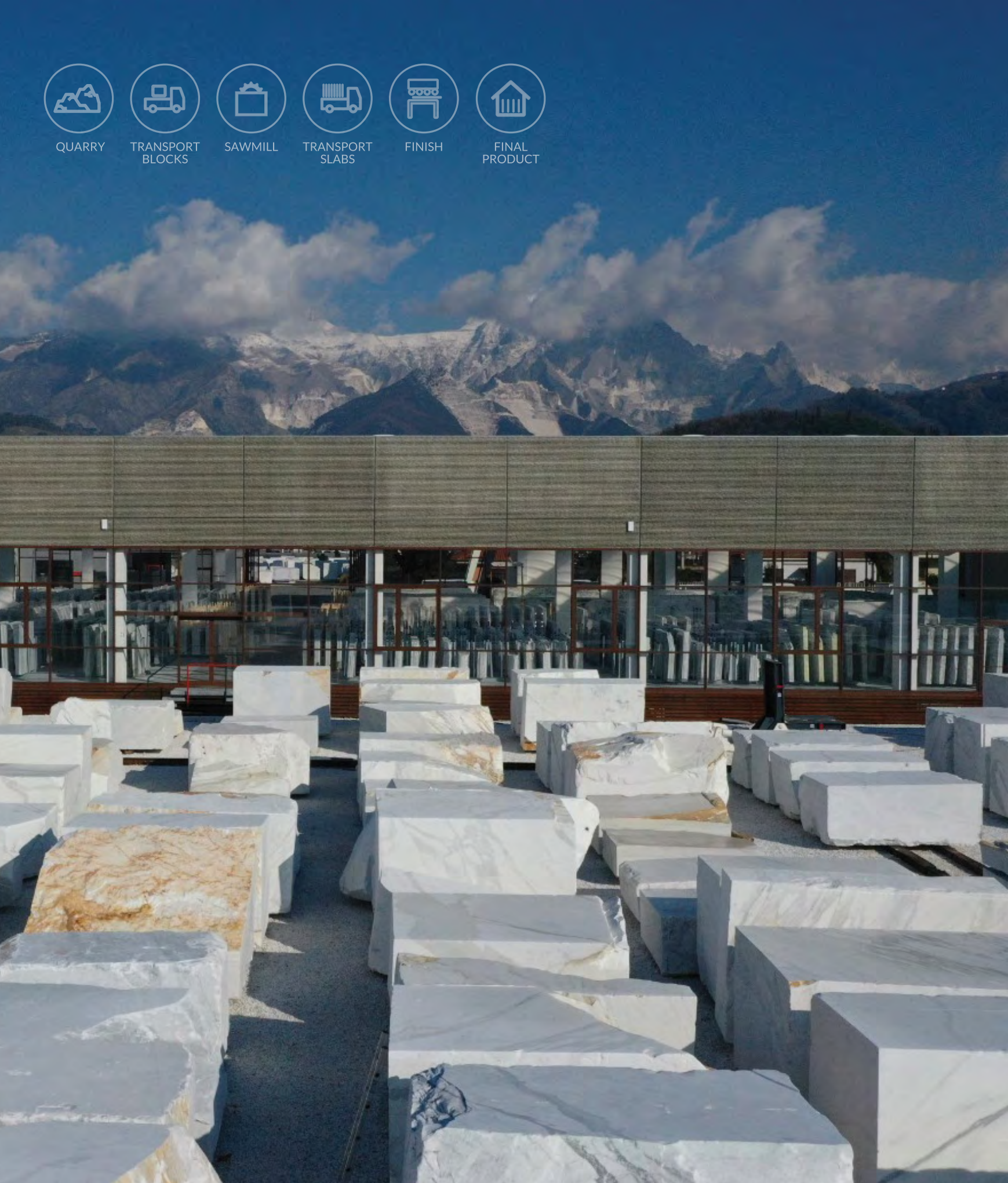
# System boundary

This EPD is of the "cradle to gate with options" type and includes the mandatory modules:

- A1 Raw materials
- A2 Transport
- A3 Manufacturing
- C1 Deconstruction/Demolition
- C2 Transport to waste processing
- C3 Waste processing
- C4 Disposal
- D Reuse/Recovery/Recycling potential

| | PRODUCT STAGE | | | CONSTRUCTION PROCESS STAGE | | USE STAGE | | | | | | | END-OF-LIFE STAGE | | | | RESOURCE RECOVERY STAGE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Raw material supply | Transport of raw materials | Manufacturing | Transport to customer | Installation | Use | Maintenance | Repair | Replacement | Refurbishment | Operational energy use | Operational water use | Decostruction/Demolition | Transport to waste processing | 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 | \| | \| | \| | - | - | - | - | - | - | - | - | - | GLO | GLO | GLO | GLO | GLO |
| SPECIFIC DATA | 60% | | | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| VARIATION PRODUCTS | GWP-GHG 23% | | | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| VARIATION SITES | 0 | | | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

*The environmental performance results are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins or risks.*


QUARRY
TRANSPORT BLOCKS
SAWMILL
TRANSPORT SLABS
FINISH
FINAL PRODUCT

# Production A1 - A3

**A1**

EXTRACTION
CUTTING
FINAL HANDLING
MARKETING

The production cycle of the quarry consists in the extraction of large-sized material from the mountain, in the subsequent cutting of the material extracted into smaller pieces and then in the final handling and marketing of the finished product (squared and shapeless blocks).

**A2**

TRANSPORT BLOCKS
WITH HEAVY VEHICLES

Heavy vehicles of recent manufacture, category Euro 6, transport the marble blocks leaving the quarry with a maximum capacity of 32 tons.
Part of the blocks are transported directly from quarry to the Canalie sawmill, while the remainder is initially transported to the warehouse in via Del Bravo and only subsequently to the sawmill.

**A3**

SQUARING/SAWING
SURFACE PROCESSING
PACKING

The processes carried out within the production sites of Franchi Umberto Marmi S.p.A. were divided into 3 phases:

- Squaring and Sawing
- Surface processing - Resin coating
- Packing

Other activities carried out on the site are related to product handling, office and showroom activities and wastewater treatment processes.



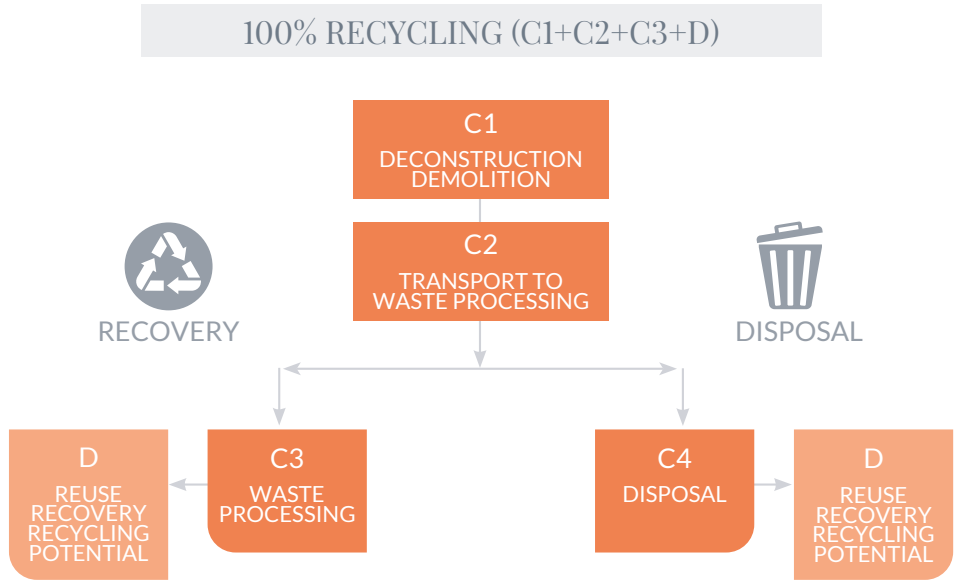
Environmental product declaration in accordance with ISO 14025:2010 and EN 15804:2012+A2:2019/AC:2021

# End of life C1 - C2 - C3 - C4

C1-C2-C3-C4

REUSE
RECYCLING

When a marble slab reaches its end of life it can undergo reuse, recycling or disposal. The 100% recycling scenario was used:




The RSL (Reference Service Life), given the nature of the product and its intended use, is estimated to be equal to the lifetime of the installation building, equal to 50 years. Module D is referred only to recycling of marble slabs (excluding packaging). The results of the end-of-life stage (modules C1-C4) should be considered when using the results of the product stage (modules A1-A3).

# Cut off

The environmental impacts relating to personnel, infrastructures, production of materials not directly consumed in the production process have not been quantified. All process inputs and outputs have been included in the calculation.



# Data quality declaration

| PROCESS | SOURCE TYPE | SOURCE | REFERENCE YEAR | DATA CATEGORY | SHARE OF PRIMARY DATA OF GWP-GHG RESULTS FOR A1-A3 |
|---|---|---|---|---|---|
| RAW MATERIAL EXTRACTION (QUARRY OPERATIONS) | Collected data | EPD owner | 2024 | PRIMARY DATA | 49,67% |
| GENERATION OF ELECTRICITY USED IN MANUFACTURING OF PRODUCT | Database | Ecoinvent 3.10 | 2024 | PRIMARY DATA | 6,47% |
| GENERATION OF ELECTRICITY USED BY SUBCONTRACTORS | Database | Ecoinvent 3.10 | 2024 | SECONDARY DATA | 0% |
| TRANSPORT OF MARBLE | Collected data | Supplier | 2024 | PRIMARY DATA | 4,59% |
| PRODUCTION OF RESIN | Database | Ecoinvent 3.10 | 2024 | SECONDARY DATA | 0% |
| OTHER PROCESSES | Database | Ecoinvent 3.10 | 2024 | SECONDARY DATA | 0% |
| | | | | **TOTAL PRIMARY DATA** | **60,7%** |

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. The quality of the data used in the model was assessed according to the criteria reported in Annex E (Table E.1) of the EN 15804:2012+A2:2019 standard (UN Environment Global Guidance on LCA database development). The evaluation considered Technological (TeR), Geographical (GeR), and Time-related (TiR) Representativeness. The overall data quality for the life cycle stages was assessed as “Very good” for the Upstream and Core stages and “Good” for the Downstream stage .

# Environmental performance

## Production stages A1 -A3

Environmental impact of 1 $m^2$ of Bettogli marble slabs - 2 cm thick.

| IMPACT CATEGORY | REFERENCE UNIT | A1 - A3 | C1 | C2 | C3 |
|---|---|---|---|---|---|
| ADP (FOSSIL) | MJ | 8.62E+01 | 1.05E+00 | 4.29E+00 | 3.06E-01 |
| ADP (MINERALS AND METALS) | Kg SBeq | 2.81E-05 | 2.96E-08 | 8.14E-07 | 3.25E-08 |
| AP | MOLE H+eq | 5.35E-02 | 2.86E-04 | 1.69E-03 | 6.72E-05 |
| EP FRESHWATER | Kg Peq | 1.25E-03 | 2.36E-06 | 2.30E-05 | 1.14E-05 |
| GWP BIOGENIC | Kg $CO_2$ eq | 6.51E-03 | 7.17E-06 | 5.20E-05 | 3.14E-05 |
| GWP FOSSIL | Kg $CO_2$ eq | 6.32E+00 | 8.14E-02 | 2.94E-01 | 1.33E-02 |
| GWP LULUC | Kg $CO_2$ eq | 4.97E-03 | 7.00E-06 | 1.17E-04 | 3.92E-05 |
| GWP TOTAL | Kg $CO_2$ eq | 6.33E+00 | 8.14E-02 | 2.94E-01 | 1.34E-02 |
| EP MARINE | Kg N eq | 1.78E-02 | 1.18E-04 | 6.88E-04 | 1.18E-05 |
| ODP | Kg CFC-11 eq | 1.46E-07 | 1.23E-09 | 4.35E-09 | 2.23E-10 |
| POCP | Kg NMVOC | 5.86E-02 | 4.56E-04 | 2.44E-03 | 3.53E-05 |
| EP TERRESTRIAL | MOLE Neq | 2.14E-01 | 1.29E-03 | 7.51E-03 | 1.04E-04 |
| WDP | $m^3$ | 6.37E+00 | 1.41E-02 | 1.10E-01 | 4.97E-02 |

| C4 | D | Product Variation % (A - C) |
|---|---|---|
| 0.00E+00 | -6.80E+00 | 25.1 % |
| 0.00E+00 | -2.93E-06 | 7.0 % |
| 0.00E+00 | -3.37E-03 | 23.0 % |
| 0.00E+00 | -1.76E-04 | 12.3 % |
| 0.00E+00 | -5.84E-04 | 6.9 % |
| 0.00E+00 | -5.54E-01 | 25.0 % |
| 0.00E+00 | -5.10E-04 | 14.2 % |
| 0.00E+00 | -5.55E-01 | 24.9 % |
| 0.00E+00 | -7.95E-04 | 28.9 % |
| 0.00E+00 | -4.43E-09 | 17.0 % |
| 0.00E+00 | -2.66E-03 | 29.4 % |
| 0.00E+00 | -9.58E-03 | 26.4 % |
| 0.00E+00 | -3.78E+00 | 14.6 % |

Life cycle impact assessment methods used: core environmental impact indicators of EN 15804:2012+A2:2019/AC:2021.
The characterisation factors (CF) are based on version 3.1 of the reference package for CFs used in the PEF framework (EF 3.1).

Purchased electricity used in the manufacturing process accounts for less than 10% of the GWP-GHG results of modules A1-A3 and its climate impact is 0.060 kg CO2 eq./kWh (using the GWP-GHG indicator).

100% of electricity purchased in module A3 is covered by Guarantees of Origin.

Biogenic carbon and recovered energy leaving the product system in modules A5 (packaging) have been balanced out already in modules A1-A3.

# Environmental performance

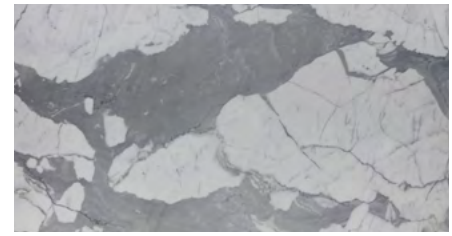
## Production stages A1 -A3

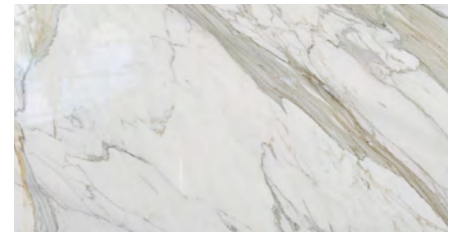
Environmental impact of 1 $m^2$ of Bettogli marble slabs - 2 cm thick.

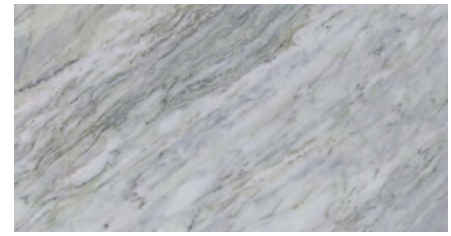
### RESOURCE CONSUMPTION

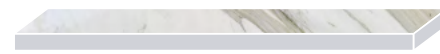
| IMPACT CATEGORY | REFERENCE UNIT | A1 - A3 | C1 | C2 |
|---|---|---|---|---|
| PERT | MJ | 8.32E+01 | 6.47E-03 | 5.56E-02 |
| PERM | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| PERE | MJ | 8.32E+01 | 6.47E-03 | 5.56E-02 |
| PENRT | MJ | 8.62E+01 | 1.05E+00 | 4.29E+00 |
| PENRM | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| PENRE | MJ | 8.04E+01 | 9.50E-01 | 3.89E+00 |
| SM | Kg | 2.73E-01 | 6.24E-04 | 3.25E-03 |
| RSF | MJ | 9.71E-02 | 7.38E-05 | 4.58E-04 |
| NRSF | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| FWT | $m^3$ | 5.45E-02 | 6.86E-05 | 6.14E-04 |

| C3 | C4 | D |
|---|---|---|
| 6.96E-02 | 0.00E+00 | -6.58E-01 |
| 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 6.96E-02 | 0.00E+00 | -6.58E-01 |
| 3.06E-01 | 0.00E+00 | -6.80E+00 |
| 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 3.00E-01 | 0.00E+00 | -6.54E+00 |
| 4.60E-03 | 0.00E+00 | -2.17E-02 |
| 2.59E-03 | 0.00E+00 | -6.93E-03 |
| 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 2.50E-04 | 0.00E+00 | -1.95E-02 |









thick slabs 2 cm

# Environmental performance

## Production stages A1 -A3

Environmental impact of 1 $m^2$ of Bettogli marble slabs - 2 cm thick.

### WASTE

| IMPACT CATEGORY | REFERENCE UNIT | A1 - A3 | C1 | C2 |
|---|---|---|---|---|
| HWD | Kg | 2.39E-01 | 9.13E-04 | 4.99E-03 |
| NHWD | Kg | 1.71E+00 | 6.85E-03 | 3.68E-02 |
| RWD | Kg | 6.10E-05 | 1.16E-07 | 9.17E-07 |
| CRU | Kg | -2.83E-19 | -5.65E-21 | -1.86E-20 |
| MFR | Kg | 1.88E-01 | 5.15E-04 | 2.70E-03 |
| MER | Kg | 4.36E-05 | 3.31E-08 | 2.06E-07 |
| EE | MJ | 6.02E-02 | 7.20E-05 | 7.56E-04 |

### ADDITIONAL INDICATOR

| IMPACT CATEGORY | REFERENCE UNIT | A1 - A3 | C1 | C2 |
|---|---|---|---|---|
| GWP - GHG | Kg $CO_2$ eq | 6.33E+00 | 8.14E-02 | 2.94E-01 |

Environmental product declaration in accordance with ISO 14025:2010 and EN 15804:2012+A2:2019/AC:2021

| C3 | C4 | D |
|---|---|---|
| 3.70E-04 | 0.00E+00 | -2.94E-02 |
| 2.22E-03 | 0.00E+00 | -1.69E-01 |
| 2.13E-06 | 0.00E+00 | -1.31E-05 |
| -9.10E-22 | 0.00E+00 | 7.23E-21 |
| 4.39E-03 | 0.00E+00 | -1.72E-02 |
| 1.16E-06 | 0.00E+00 | -3.11E-06 |
| 1.41E-03 | 0.00E+00 | -5.69E-03 |

| C3 | C4 | D | Product Variation % (A - C |
|---|---|---|---|
| 1.34E-02 | 0.00E+00 | -5.55E-01 | 33.0 % |



The function of design is to draw things that last forever, not ephemeral.
When something is ephemeral, it is valid for what it is worth: nothing.

*Massimo Vignelli*

Environmental product declaration in accordance with ISO 14025:2010 and EN 15804:2012+A2:2019/AC:2021

# Acronyms

## Environmental impacts:

ADP[1] - Abiotic Depletion Potential (minerals & metals)
ADP[1] - Abiotic Depletion Potential (fossil)
AP - Acidification Potential
EP - Eutrophication Potential
GWP - Global Warming Potential
ODP - Ozone Depletion Potential
POCP - Photochemical Ozone Creation Potential
WDP[1] - Water Deprivation Potential

## Resource consumption:

PERT - Total use of renewable primary energy resources
PERM - Use of renewable primary energy resources used as raw materials
PERE - Use of renewable primary energy excluding renewable primary energy resources used as raw materials
PENRT - Total use of non-renewable primary energy resources
PENRM - Use of non-renewable primary energy resources used as raw materials
PENRE - Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials
SM - Use of secondary material
RSF - Use of renewable secondary fuels
NRSF - Use of non-renewable secondary fuels
FWT - Total use of net fresh water

## Waste production:

HWD - Hazardous waste disposed
NHWD - Non-hazardous waste disposed
RWD - Radioactive waste disposed
CRU - Components for reuse
MFR - Materials for recycling
MER - Materials for energy recovery
EE - Exported energy

[1] **Disclaimer**: The results of this environmental impact indicator shall be used with care as the uncertainties on the results are high or as there is limited experienced with the indicator.


HOME
DESIGN

# Verification and registration

EPD of construction products may not be comparable if they do not comply with EN 15804:2012+A2:2019/AC:2021.
Environmental Product Declaration within the same product category from different programs may not be comparable.

## CEN standard EN 15804 served as the core PCR

## Product Category Rules (PCR)

International EPD System - PCR 2019:14 - “Construction products”
Version 2.0.1



# References

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## Differences versus previous version

2020-12-11 Version 1
2022-05-12 Version 2
2022-12-14 Version 3
2023-10-11 Version 4
2024-04-29 Version 5
2025-07-21 Version 6

**Variation of results**
The variation in results is due to:

- Update of the mix of electricity consumed (100% renewable with guarantee of origin in module A3);
- Updating of primary activity data;
- Inclusion of the amount of resin an energy used by third parties for the processing of the slabs
- Study updated to GPI 5.0.1 and PCR 2.0.1



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