



Environmental Product Declaration

According to ISO 14025:2006 and EN 15804:2012+A2:2020/AC:2021 norms for:

STACBOND® COMPOSITE PANELS FOR CLADDING

EPD of multiple products, based on representative product Version 4.0.

From ECO BIERZO COMPOSITE S. L. (STACBOND®)



| Program: | The International EPD* System, www.envirodec.com |
|----------------------|--|
| Program operator: | EPD International AB |
| EPD registry number: | S-P-01289 |
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| Valid until: | 2028-03-01 |





General Information

Program information

| Program: | The International EPD [®] System | | | | | |
|----------|---|--|--|--|--|--|
| | EPD International AB | | | | | |
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The CEN EN 15804 standard serve as the main Product Category Rules (PCR)

Product Category Rules (PCR): PCR 2019:14 Construction Products (EN 15804:A2 2020/AC:2021) Version 1.3.4

Life cycle assessment author:

IK Ingeniería

Av. Cervantes 51, Edif. 10, panta 5, dpto.

48970 Basauri, Bizkaia (Spain)

External verifier:

CERTINALIA

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Accredited by: ENAC no. 125/C-PR283.

The process of monitoring data during the validity of the EPD involves the external verifier:

🛛 Yes 🗆 No

The EPD owner has the exclusive for the EPD, ownership, responsibility and obligations.

The EPD in the same product category, but registered under different EPD programs, or that do not comply with EN 15804 might not be comparable. For two EPD to be comparable, they must be based on the same PCR (including the same version number) or be based in two EPD, or totally aligned EPD versions, must cover products with identical





functionality, technical performances and uses (for example: identical declared units or functions); have equivalent system limits and data descriptions; apply equivalent requirements of data quality, data collection methods, and assignation methods; apply identical cut rules and impact assessment methods (including the same version of characterization values); have equivalent content declarations; and that are in force in the moment of comparison. For more information about compatibility, see EN 15804 and ISO 14025.





Company information

EPD owner: ECO BIERZO COMPOSITE S.L.

Company description: ECO BIERZO COMPOSITE S. L., is a company that specializes on production of aluminum cladding products.

In each of its two divisions, ECO BIERZO COMPOSITE S. L. aims for a millimetric precision on design, hoping to fulfill the demands of the current market on their requisites of quality and innovation. Due to this it does not only have the best equipment that works perfectly on each production line, but it also has a specialized technical team that has helped ECO BIERZO COMPOSITE S. L. to become one of the market leaders. These divisions are:

- STACBOND: Manufacturing of aluminum composite panels
- STACBOND COIL COATING: Processing and continuous coil coating

STACBOND[®] is the market leader on composite panels in Spain. Since 2008 it has been developing products meant for ventilated façades. ECO BIERZO COMPOSITE S. L. has the following certifications and standards:

- ISO9001
- ISO14001
- Zero Waste





Figure 1. ISO 9001, ISO 14001 and Zero Waste certificates

Name(s) and location(s) of plant(s): C/ Isaac Prado Bodelón S/N, Polígono Industrial de La Rozada, Parandones, 24516 Toral de los Vados, León, Spain

Contact: For more information about these or other products, please contact us on the email: epd@stacbond.es



Product information

Product name: STACBOND® Composite Panel

Product description: The STACBOND[®] Composite Panel is composed of two aluminum sheets, bonded by a core made of variable mineral loads. It is lacquered with top quality paints, offering the best resistance to ageing. Finishes can be as follows:

- PVDF
- HDPE
- FEVE
- РЕ
- PU

Manufacturing of the STACBOND[®] Composite Panel follows a controlled process by rigorous testing and quality control. It has multiple possibilities of use, some of them being as follows:

- Ventilated façade
- Roofs and false ceilings
- Balconies and cantilevered areas
- External gates, gates and marquees
- Urban furniture equipment
- All kinds of external equipment
- Industrial applications (automotive, railroads, furniture, car bodies, etc....)



STACBOND®FR composite aluminum panel

The STACBOND[®]FR panel has been developed to comply with the most stringent requirements of the current fire resistance regulations. Its core is made of thermoplastic resins (low density polyethylene and fire retardant mineral compounds) has a classification against fire of B-s1,d0 according to the UNE-EN 13501-1:2019. This panel stands out in the market for being one of the most fire resistant.





- ETE/ETA 15/0655 issued by IETcc (Instituto Eduardo Torroja de Ciencias de la Construcción, Madrid, Spain)
- DITplus 553p-25 issued by IETcc (Instituto Eduardo Torroja de Ciencias de la Construcción, Madrid, Spain)
- Avis Technique 2.2/13-1548_V4 issued by CSTB (Centre Scientifique et Technique du Bâtiment, Marne la Vallée, France)





- Avis Technique 2.2/13-1549_V3 issued by CSTB (Centre Scientifique et Technique du Bâtiment, Marne la Vallée, France)
- ESR-4234 issued by ICC-ES (International Code Council Evaluation Service, Long Beach, USA)
- DIBt Zulassung Z-10.3-809 issued by DIBt (Deutsches Institut f
 ür Bautechnik, Berl
 ín, Germany)
- ATM issued by Intertek (Illinois, USA)
- ITB-KOT-2017/0043 wydanie 3 issued by ITB (Instytut Techniki Budowlanej, Warsaw, Poland)
- Valor AMEVEC issued by AMEVEC (Ciudad de México, México)
- VKF/AEAI 30738 issued by VKF/AEAI (Vereinigung Kantonaler
 Feuervesicherungen/Assocaciation des établissements cantonaux d'assurance incendie,
 Bern, Switzerland).

| Width (min / max.) | mm | | 800 / 2000 |
|--------------------------|---------|-----------------------|-------------|
| Length (min / max.) | mm | | 2000 / 6000 |
| Peeling | N/mm | ASTM D903 - 98 (2004) | ≥ 7.0 |
| Rigidity | kNcm²/m | DIN 53293 | 2610 |
| Resistant Modulus | mm³/m | DIN 53293 | 1.496 |
| Acoustic isolation Rw | dB | ISO 717-1 | 33 (-1; -4) |
| Thermal transmission (U) | W/m²K | UNE-EN ISO 12567-1 | 5.67 |
| Service temperature | °C | | - 50 / + 80 |

Panel technical data sheet:





STACBOND®A2 aluminum composite panel

The STACBOND®A2 composite panel, with mineral core, has been developed to comply with the highest requirements of the current fire resistance regulations. It has an A2-s1,d0 fire classification, according to the UNE-EN 13501-1:2019 norm. This makes the new STACBOND®A2 the panel of choice for high rises and high traffic buildings, such as hospitals, shopping malls, airports or auditoriums.



Figure 3. STACBOND®A2.

 ETE/ETA 15/0655 issued by IETcc (Instituto Eduardo Torroja de Ciencias de la Construcción, Madrid, Spain)



- DITplus 553p-25 issued by IETcc (Instituto Eduardo Torroja de Ciencias de la Construcción, Madrid, Spain)
- Avis Technique 2.2/13-1548_V4 issued by CSTB (Centre Scientifique et Technique du Bâtiment, Marne la Vallée, France)
- Avis Technique 2.2/13-1549_V3 issued by (Centre Scientifique et Technique du Bâtiment,
 Marne la Vallée, France)
- DIBt Zulassung Z-10.3-809 issued by DIBt (Deutsches Institut f
 ür Bautechnik, Berl
 ín, Germany)
- ITB-KOT-2017/0043 wydanie 3 issued by ITB (Instytut Techniki Budowlanej, Warsaw, Poland)
- Valor AMEVEC issued by AMEVEC (Ciudad de México, México)
- VKF/AEAI 30739 issued by VKF/AEAI (Vereinigung Kantonaler
 Feuervesicherungen/Assocaciation des établissements cantonaux d'assurance incendie,
 Bern, Switzerland).

Panel technical data sheet:

| Width (min / max.) | mm | | 800 / 2000 |
|--------------------------|---------|-----------------------|-------------|
| Length (min / max.) | mm | | 2000 / 6000 |
| Peeling | N/mm | ASTM D903 - 98 (2004) | ≥ 3 |
| Rigidity | kNcm²/m | DIN 53293 | 2400 |
| Resistant module | mm³/m | DIN 53293 | 1.496 |
| Acoustic isolation Rw | dB | ISO 717-1 | 29 (-1; -3) |
| Thermal transmission (U) | W/m²K | UNE-EN ISO 12567-1 | 5.67 |
| Service temperature | °C | | - 50 / + 80 |

UN CPC code: Following the product classification system of UN-CPC, the corresponding code to the product manufactured by ECO BIERZO COMPOSITE S. L. is CPC 314 "Boards and panels".



LCA information

Declared unit: The base declared unit is the one all information is collected of. For this study, the declared unit is "Im² of STACBOND[®] panel" with 4mm thickness for the following references:

- STACBOND®FR PVDF
- STACBOND®FR HDPE
- STACBOND®FR FEVE
- STACBOND®FR PE
- STACBOND®FR PU
- STACBOND®A2 PVDF
- STACBOND®A2 HDPE
- STACBOND®A2 FEVE
- STACBOND®A2 PE
- STACBOND®A2 PU

Due to the fact that panels included on this EPD serve the same function and present a similar composition, it has been determined that the results of the panel with the higher production volume, will be used as representative values for the rest of the declared panels.

Reference service life: Not relevant for this EPD.

Geographic scope: The geographic scope of this EPD is global.

Temporal representativeness: Data collection from the factory (primary data) and electrical mix are from January 1st, 2023, to December 31st, 2023. For this study, no data has been used with an age over 10 years.

Database(s) and LCA software used: All data used to model the process and obtain Life Cycle Assessment are specific data and are obtained from measures done from the period between January





1st, 2023, to December 31st, 2023. These are representative of the different processes implemented during the manufacturing process. Data is measured directly on the company installations. Also, the most complete and higher quality database of life cycle inventory of Europe has been used, Ecoinvent 3.10, due to the fact that this database contains the most comprehensive up-to-date information, and its scope coincides with the project scope, both geographical, technological and timeframe. LCA was modelled with Simapro 9.6.0.1.

System limits description: Following the UNE-EN 15804:2012+A2:2020/AC:2021 (September 2021) y PCR 2019:14 CONSTRUCTION PRODUCTS (version 1.3.4) standards, system limits are from cradle to gate, with C1-C4 modules and module D (A1-A3 + C + D). Life cycle phases A4-A5, B1-B7 have been excluded from the LCA study.



System diagram:



Manufacturing process:

- 1. The line produces a homogeneous mix and develops enough pressure, so the panel appears continuously.
- 2. Aluminum sheets are supplied in coils. They are treated and coated according to the requested finish. Once coated, they are introduced into a processing line, composed of compound rollers. These bond the sheet to the core by compression, leaving a continuous sandwich panel.
- 3. By heat, both elements (core and sheets) are firmly bonded, and the excess is cut with blades.
- 4. The continuous panel passes through the rollers that flatten the panel to the desired tolerance, later it is cooled down and straightened to the required flatness.
- 5. Protective film is applied before the panel is cut to size, by lateral cutting and shearing.
- 6. Finally, panels are measured and labelled before palletizing them for shipment.

Data quality

The environmental impact of STACBOND[®] panels has been calculated. It is based on international standards established for the Development of Environmental Product Declarations, such as ISO 14025 for the preparation of the environmental product declaration, ISO 14040 and ISO 14044 for the preparation of





the life cycle assessment, UNE-EN 15804:2012+A2:2020/AC:2021 (September 2021) and the Product Category Rules PCR - "2019:14 Construction products" (version 1.3.4).

Data has been collected from January 1st, 2023, to December 31st, 2023, and are representative of that year. Raw materials supply data, shipment to the factory and production (A1-A3) are based on specific consumption data for the Parandones factory. Generical background data sets were used for the downstream processes. The SimaPro v9.6.0.1 software was used to prepare the life cycle assessment together with the Ecoinvent 3.10 database. Characterization factors were taken from UNE-EN 15804:2012+A2:2020/AC:2021. Geographic coverage is global. Technological coverage is typical or mean. The Characterization Factors corresponding to the ones established by the EN 15804 Reference Package EF 3.1.

Assumptions

Modularity principles have been followed and who pollutes pays. The following assumptions have been taken for this EPD:

- The capital goods manufacturing process is not included, the replacement parts and/or maintenance with a life of more than three years.
- The environmental impact of general administration, offices and headquarter operations is not included.
- ✓ Impact caused by people (common activities, transportation to work...) are not considered.
- It does not include the natural gas consumption for sanitary hot water in showers and heating for people's comfort.
- The processes associated with combustible production are intrinsically included on the ECOINVENT database indicators, used to develop the LCA.
- The environmental impact of external transportation has been calculated using trucks from the ECOINVENT 3.10 database, with EURO 5. These trucks have been selected to represent the most realistic scenario possible.

Cut rules





ISO 14025 and the PCR -"2019:14 CONSTRUCTION PRODUCTS" standards show that the life cycle assessment data should include at least 95% of the total of inputs (materials and energy) for each phase. This cut rule does not apply to dangerous materials and substances. This cut criteria have not been considered for this study.

Assignation.

Where necessary, an assignment based on mass, for waste generation and energies consumption has been used.

Greenhouse effect gases from electricity used in the construction phase

The specific low voltage electrical mix has been used (direct emissions and network losses), considered for the production process.

| Electrical mix | Quantity | Units |
|-------------------------|----------|----------------|
| Specific electrical mix | 5.00E-01 | Kg CO2-eqv/kWh |

LCA scenarios and additional technical information

Disassemble/demolition (module C1):

On this module, the energy for disassembling has been taken from the one needed to do it with a radial saw.

Transportation (module C2):

With a collection rate of 100%, transport is done by truck (EURO 5) for 50km.

Waste processing (modules C3 y C4):

It is considered a recycling rate of 89% according to the statistic of construction waste recovery and demolition, published by <u>Eurostat</u>, also it has been considered the impact of the waste separation. The other 11 % is considered to end at a landfill. This percentages are representative of the areas where the product is sold. Also, in module C3, the electrical consumption needed to separate the core from the aluminum sheets has been considered.





Recycling potential (module D):

Panel is separated into core and aluminum sheets for its recycling, and it is reused to replace the polyethylene from the core and virgin aluminum respectively. The recycling process loads and benefits of the replacement of virgin materials have been considered.

| Processes | Per declared unit | | | | | |
|-----------------------------------|---|--|--|--|--|--|
| Recollection process | 7.70E+00 | Kg collected separately | | | | |
| expressed by type | 0.00E+00 | Kg collected mixed with construction waste | | | | |
| Pecovery system specified by | 0.00E+00 | Kg for reuse | | | | |
| type | 6.85E+00 | Kg for recycling | | | | |
| typo | 0.00E+00 | Kg for energetic recovery | | | | |
| Disposal per type | 8.47E-01 | Kg for final disposal | | | | |
| Transport scenario assumptions | 16-32 metric tons truck, EURO5 Consumption: 0.03kg/km Distance: 50 km | | | | | |

LCA end of life scenarios

Declared modules, geographical scope, specific data percentage (according to GWP-GHG indicator) and data variation:



| | | | | Constru | ction | | | | | | | | | | Resources | | |
|-------------------------|----------------------------|-----------|---------------|-----------|----------------------------------|-----|-------------|--------|-------------|---------------|-------------------------------|------------------------------|-------------------------------|-----------|------------------|----------|--|
| | Pro | duct pha | se | process | nhase | | | ι | Jse pl | nase | | | End-of | f-life pl | nase | | recovery |
| | | | | process | pridse | | | | | | | | | | | | phase |
| | Supply of raw materials | Transport | Manufacturing | Transport | Installation and construction | esu | Maintenance | Repair | Replacement | Refurbishment | Use of energy in operation | Use of water in operation | Disassemble and demolition | Transport | Waste processing | Disposal | Recovery-reuse- recycling potential |
| Module | A1 | A2 | A3 | Α4 | A5 | B1 | B2 | В3 | В4 | В5 | B6 | В7 | Cl | C2 | C3 | C4 | D |
| Declared modules | Х | х | Х | ND | ND | ND | ND | ND | ND | ND | ND | ND | х | Х | х | Х | Х |
| Geograph ic scope | EU | EU | EU | ND | ND | ND | ND | ND | ND | ND | ND | ND | GLO | GLO | GLO | GLO | GLO |
| Specific data | | >90% | | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Variation- products | | 18.84% | | _ | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Variation- locations | | 0% | | _ | - | - | - | - | - | - | - | - | - | - | - | - | - |

ND: Non declared

EU: European Union

GLO: Global

| Impact category | Unit | Variation |
|-------------------------------|-------------|-----------|
| Climate change - Fossil | kg CO2 eq | 18.82% |
| Climate change - Biogenic | kg CO2 eq | 40.74% |
| Climate change – Land use and | kg CO2 eq | 39.88% |
| LU change | | |
| Climate change | kg CO2 eq | 18.84% |
| Ozone depletion | kg CFC11 eq | 35.62% |
| Acidification | mol H+ eq | 29.97% |
| Eutrophication, freshwater | kg P eq | 24.16% |
| Eutrophication, marine | kg N eq | 27.38% |
| Eutrophication, terrestrial | mol N eq | 28.16% |
| Photochemical ozone formation | kg NMVOC eq | 23.59% |
| Resource use, minerals & | ka Sh ea | 20.84% |
| metals | Ng 00 04 | 20.0170 |
| Resource use, fossils | MJ | 14.21% |





| Water use | m3 depriv. | 15.63% |
|-----------|------------|--------|
| GHG-GWP | kg CO eq | 18.84% |





Content information

| | Per 1 m ² | | | | | | |
|---------------------|----------------------|---------|------------------------------|-----------|--|--|--|
| Product components | | Post-co | nsumer | Renewable | | | |
| Floddet components | Weight, kg | materi | al, % of | material, | | | |
| | | we | ight | % weight | | | |
| Mineral core | 4.80E+00 | 45. | 51% | 0,00% | | | |
| Aluminum | 2.48E+00 | 69. | 0,00% | | | | |
| Lacquer | 2.13E-01 | 0,0 | 0% | 0,00% | | | |
| Adhesive | 2.11E-01 0, | | 0% | 0,00% | | | |
| TOTAL | 7.70E+00 | 0,0 | 0% | 0,00% | | | |
| Packaging materials | Weight, kg | | Weight-% (in relation to the | | | | |
| | | | product) | | | | |
| Film | 1.75E-04 | | | 0,00% | | | |
| Wood | 5.93E-02 | | | 0,77% | | | |
| Cardboard | 3.18E-02 | | | 0,41% | | | |
| TOTAL | 9.13E-02 | | 1,19% | | | | |

Packaging: Product is shipped to the work location packaged with plastic film and cardboard, in pallets.

| Panel conversion factor | lm² |
|-------------------------|--------|
| | 7.70kg |

There are no substances included on the list of Candidate Substances of Very High Concern under the REACH norm presented on the assessed panels, manufactured by STACBOND®, either above the limit for the registry by the European Agency of Chemicals, or over 0.1 % (weight/weight).









Environmental information

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.

Potential environmental impact - mandatory markers according to EN 15804:

| Results per declared unit | | | | | | | | | | |
|---------------------------|--------------------|----------|----------|----------|----------|----------|-----------|--|--|--|
| Indicator | Unit | A1-A3 | C1 | C2 | C3 | C4 | D | | | |
| GWP-fossil | kg CO ₂ | l | | | | | | | | |
| | eq. | 1.82E+01 | 1.86E-02 | 6.87E-02 | 1.67E+00 | 6.98E-02 | -2,83E+01 | | | |
| GWP- | kg CO ₂ | | | | | | | | | |
| biogenic | eq. | 1.22E-01 | 1.02E-04 | 2.18E-05 | 1.88E-02 | 1.94E-05 | -8.31E-02 | | | |
| GWP-luluc | kg CO ₂ | | 4.63E- | | | | | | | |
| | eq. | 1.24E-01 | 05 | 3.34E-05 | 1.10E-03 | 2.43E-06 | -3.93E-01 | | | |
| GW/P-total | kg CO ₂ | | | | | | | | | |
| | eq. | 1.85E+01 | 1.87E-02 | 6.88E-02 | 1.69E+00 | 6.98E-02 | -2.88E+01 | | | |
| ODP | kg CFC | | | | | | | | | |
| | 11 eq. | 3.67E-07 | 3.53E-10 | 1.49E-09 | 1.61E-08 | 2.66E-10 | -5.32E-07 | | | |
| ۸P | mol H⁺ | | 1.06E- | | | | | | | |
| | eq. | 7.87E-02 | 04 | 2.24E-04 | 4.54E-03 | 6.21E-05 | -1.85E-01 | | | |
| EP-fresh | ka P ea | | 1.84E- | | | | | | | |
| water | kgr eq. | 5.88E-04 | 06 | 5.50E-07 | 2.92E-05 | 8.73E-08 | -1.01E-03 | | | |
| EP-marine | kg N eq. | 1.29E-02 | 1.33E-05 | 7.61E-05 | 1.35E-03 | 3.88E-05 | -2.35E-02 | | | |
| EP-terrestrial | mol N | | 1.55E- | | | | | | | |
| Li terrestriai | eq. | 1.42E-01 | 04 | 8.14E-04 | 1.44E-02 | 2.80E-04 | -2,61E-01 | | | |
| | kg | | | | | | | | | |
| POCP | NMVOC | | 5.00E- | | | | | | | |
| | eq. | 5.89E-02 | 05 | 3.35E-04 | 5.37E-03 | 1.19E-04 | -1.06E-01 | | | |
| ADP-minerals | kg Sb | | 2.22E- | | | | | | | |
| and metals* | eq. | 2.31E-04 | 07 | 2.21E-07 | 6.59E-06 | 2.94E-08 | -5.86E-05 | | | |
| ADP-fossil* | MJ | 2.71E+02 | 4.20E-01 | 9.74-01 | 1.65E+01 | 2.11E-01 | -5,57E+02 | | | |





| | | | 4.74E- | | | | | | | |
|----------|---|-------------------|------------|------------------|--------------------|-------------------|------------------|--|--|--|
| WDP | m³ eq | 6.23E+00 | 03 | 3.97E-03 | 2.04E-01 | 9.92E-04 | -1.19E+01 | | | |
| | GWP-fossi | l = Global Warr | ning Pote | ntial fossil com | bustibles; GWP | -biogenic = Pot | ential biogenic | | | |
| | global war | ming potential; | GWP-lulu | ıc = Global warı | ming potential | use of land and | change of use | | | |
| | of land; C | DDP = Stratosp | heric Ozo | one layer Deple | etion Potential | ; AP = Acidifico | ation Potential, | | | |
| | accumulated excess; EP-fresh water = Eutrophication Potential, fraction of nutrients that advance | | | | | | | | | |
| Acronyms | into fresh v | water; EP-marin | e = Eutrop | hication Potent | ial, fraction of 1 | nutrients that ad | lvance into salt | | | |
| | water; EP-terrestrial = Eutrophication Potential, accumulated excess; POCP = Photochemical | | | | | | | | | |
| | Ozone Creation Potential; ADP-minerals and metals = Abiotic Depletion Potential for non-fossil | | | | | | | | | |
| | resources; | ADP-fossil = | Abiotic D | epletion Potent | ial for non-fc | ossil resources; | WDP = Water | | | |
| | Deprivatio | n Potential (as u | ıser) wate | r consumption | weighted by de | eprivation. | | | | |

* Warning: Results from this impact indicator must be used carefully, due to the uncertainties of these results are high

or there is limited experience with the indicator.

Potential environmental impact - mandatory and voluntary additional indicators

| Results per declared unit | | | | | | | |
|---------------------------|--------------------|----------|----------|----------|----------|----------|-----------|
| Indicator | Unit | A1-A3 | C1 | C2 | C3 | C4 | D |
| GWP-GHG ¹ | kg CO ₂ | | | | | | |
| | eq. | 1.85E+01 | 1.87E-02 | 6.88E-02 | 1.69E+00 | 6.98E-02 | -2.88E+01 |

Use of resources

| Results per declared unit | | | | | | | |
|---------------------------|------|----------|----------|----------|----------|----------|---------------|
| Indicator | Unit | A1-A3 | C1 | C2 | C3 | C4 | D |
| PERE | MJ | 3.78E+01 | 9.18E-02 | 1.51E-02 | 8.62E-01 | 2.16E-02 | - 1.02E+02 |
| PERM | MJ | 6.45E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| PERT | MJ | 4.42E+01 | 9.18E-02 | 1.51E-02 | 8.62E-01 | 2.16E-02 | - 1.02E+02 |

¹ The indicator includes all greenhouse effect gases included on GWP-total but excludes the consumption of carbon dioxide and the emissions, and the biogenic carbon stored in the product. So, this indicator is equal to the GWP indicator originally defined on norm EN 15804:2012+A1:2013.



| DENIDE | N 4 1 | 1745±00 | 4 205-01 | 0.745-01 | 1655+01 | 2 115-01 | - |
|--------|-------|----------|-----------------------|----------|----------|----------|----------|
| FEINRE | IVIJ | 1.742+02 | 4.205-01 | 9.74E-01 | 1.052+01 | 2.112-01 | 5.57E+02 |
| PENRM | MJ. | 9.69E+01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| PENRT | MJ | 2.71E+02 | 4.20E-01 | 9.74E-01 | 1.65E+01 | 2.11E-01 | - |
| | | | | | | | 5.57E+02 |
| SM | kg | 3.90E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| RSF | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| NRSF | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| E\M/ | m3 | 3 495-01 | 3 325-04 | 1395-04 | 6 225-03 | 2745-04 | -6.34E- |
| I VV | 1115 | 5.432-01 | J.JZE ⁻ 04 | 1.552-04 | 0.226-03 | 2.74C-04 | 01 |

| | PERE = Use of renewable energy excluding renewable primary 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 |
| Acronyms | energy; PENRM = 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 production and output flows

Waste production

| Results per declared unit | | | | | | | | |
|---------------------------------|------|----------|----------|----------|----------|----------|---------------|--|
| Indicator | Unit | A1-A3 | Cl | C2 | C3 | C4 | D | |
| Dangerous waste disposed | kg | 2.80E-02 | 7.39E-07 | 6.20E-06 | 5.98E-05 | 9.48E-07 | -7.10E-04 | |
| Non-dangerous waste disposed | kg | 3.84E+00 | 1.70E-03 | 4.76E-02 | 8.46E-01 | 8.19E-01 | - 5,56E+00 | |
| Radioactive waste disposed | kg | 6.75E-04 | 3.01E-06 | 3.16E-07 | 1.63E-05 | 2.43E-07 | -8.22E- 04 | |





Output flows

| | Results per declared unit | | | | | | |
|----------------------------------|---------------------------|----------|----------|----------|----------|----------|----------|
| Indicator | Unit | A1-A3 | C1 | C2 | C3 | C4 | D |
| Components for reuse | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Material for recycling | kg | 1.65E-01 | 0.00E+00 | 0.00E+00 | 6.85E+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, electricity | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Exported energy, thermal | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

Biogenic carbon content information

| Results per declared unit | | | | | | |
|--|------|----------|--|--|--|--|
| BIOGENIC CARBON CONTENT | Unit | QUANTITY | | | | |
| Biogenic carbon content on the product | kg C | 0.00E+00 | | | | |
| Biogenic carbon content on packaging | kg C | 0.00E+00 | | | | |

The product does not contain biogenic carbon and the mass of materials that contain biogenic carbon on the packaging is less than 5 % of the product mass, so the declaration of biogenic carbon can be omitted.





Additional information

For more information about these or other services, please visit our website: https://www.stacbond.com/descargas or contact us by email: <u>epd@stacbond.es</u>

Information related to the Sector EPD

This is an individual EPD®.

Differences from earlier versions

On this version V 4.0 of the EPD, data corresponding to the new production process has been updated.

A new kind of finish for panels has been added: FEVE.

PE and DESIGN PLUS families have not been included on this update.

References

- General Instructions of the Global EPD® Programme. Version 4.0.
- ISO 14020:2000 Environmental labels and declarations. General principles.
- ISO 14025:2010 Environmental labels and declarations Type III environmental declarations.
 Principles and Procedures.
- ISO 14040:2006 Environmental management. Life cycle assessment Principles and framework.
- ISO 14044:2006 Environmental management. Life cycle assessment Requirements and guidelines.
- PCR 2019:14 Construction products (EN 15804: A2) version 1.3.4
- UNE-EN 15804:2012+A2:2020/AC:2021 Sustainability of construction works Environmental
 Product Declarations Core rules for the product category of construction products.





VERIFICATION STATEMENT CERTIFICATE CERTIFICADO DE DECLARACIÓN DE VERIFICACIÓN

Certificate No. / Certificado nº: EPD12601

CERTINALIA, S.L.U., confirms that independent third-party verification has been conducted of the Environmental Product Declaration (EPD) on behalf of:

CERTINALIA, S.L.U., confirma que se ha realizado verificación de tercera parte independiente de la Declaración Ambiental de Producto (DAP) en nombre de:

ECO BIERZO COMPOSITE, S.L. Calle Isaac Prado Bodelón, s/n **Polígono Industrial La Rozada** 24516 Parandones, Toral de los Vados (León) - SPAIN

for the following product(s): para el siguiente(s) producto(s):

STACBOND® COMPOSITE FACADE PANELS, REFERENCES: STACBOND[®] FR AND STACBOND[®] A2 PANELES DE FACHADA DE COMPOSITE STACBOND[®]. REFERENCIAS: STACBOND[®] FR Y STACBOND[®] A2

with registration number EPD-IES-0001289 in the International EPD® System (www.environdec.com). con número de registro EPD-IES-0001289 en el Sistema International EPD® (www.environdec.com).

it's in conformity with: es conforme con:

• ISO 14025:2010 Environmental labels and declarations. Type III environmental declarations.

- General Programme Instructions for the International EPD[®] System v.4.0.
- PCR 2019:14 Construction products (EN 15804+A2) v. 1.3.4.
- UN CPC 314 Boards and panels.

| Issued date / Fecha de emisión: | 18/06/2025 |
|---------------------------------------|--------------|
| Update date / Fecha de actualización: | 18/06/2025 |
| Valid until / Válido hasta: | 01/03/2028 |
| Serial № / № Serie: | EPD1260100-E |



Carlos Nazabal Alsua Manager



This certificate is not valid without its related EPD.

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