BARBIERI

ENVIRONMENTAL PRODUCT DECLARATION

In accordance with
ISO 14025:2006 and EN 15804:2012

Programme:
The International EPD ® System

Programme operator:
EPD Internacional AB

EPD registration number:
S-P-03537

Issue date:
12/04/2021

Validity date:
11/04/2026

Galvanized steel profiles
Drywall Plus®

Manufactured by A.D. Barbieri S.A. Argentina

WE CHOOSE TO **INNOVATE**

We conceive innovation and education as engines for sustainable development.

1 - EPD content

2 - Barbieri

Barbieri is a global, family business founded in 1953 in Argentina by Arduín Darío Barbieri, national referent as regards Corporate Social Responsibility activities. This led to having people's lives improvement and building a brighter future and a better world as inherent goals for the company.

Throughout the years, Barbieri became a **leader in high-quality solution construction with cutting edge technology within the dry construction industry.**

The company's main brands are Steel Frame®, galvanized steel profiles, whose dry assembly allows for the building of dwellings, interstories, outdoors enclosures, and industrial ships among other things, and **Drywall Plus®**, galvanized steel profiles used to build non-load bearing partitions, ceilings, and linings coatings in dwellings and/or shops.
The Company has over 180 employees in Argentina and it reaches 250 employees when its regional business is considered.

Barbieri offers a value chain association for comprehensive growth while providing solution construction and technical assistance to develop effective work. It also offers broad theoretical and practical training about the constructive system aimed at achieving social inclusion and creating growth and development opportunities.

In addition, Barbieri Works with "Consul Steel", an exclusive consulting firm for Steel Frame, working towards an easier transition from wet systems to dry, more sustainable systems. This is done specifically by providing training and comprehensive technical assistance throughout the whole construction process.

OUR
GOAL

Build future
Build a family

Today, we are still committed to our goal to "**Build Future, Build a Family"** through a new sustainable corporate paradigm and with lasting, cooperative bonds.

OUR MISSION

Redefining the meaning of work in our value chain creating opportunities that encourage us to grow together.

Our guiding values are:

- **Integration:** we build a big family together.
- **Commitment:** we all cooperate with our goals.
- **Passion:** We love what we do, and so we keep on dreaming.
- **Honesty:** Trust is our management policy.
- **Sustainability:** We are innovative towards triple impact.

These are the basis on which we design our triple impact strategy, always in line with our business core, sustainable construction. We make sure to be mainstream by addressing economic, social, and environmental matters through their 4 supporting pivots:

- *Welfare:* we want that every member of the Company be able to grow personally and professionally and we are committed to that wish.
- *Responsible production:* we are committed to be innovative and to continuously offer sustainable consumption and production methods.
- *Community:* through innovation, strategic partnerships, and education, we seek to change the construction industry and to foster a sustainable construction system.
- *Sustainability Leadership:* we aim to lead the change towards a triple-impact-based paradigm through internal cultural evolution and by prompting other actors to rethink their own businesses.

Moreover, and in line with our strategy we undertook the commitment of being part of the 2030 Agenda thus **contributing to the SDGs we deem to be strategic.**

3 - General information

Products	Montante 34 x 0,52; Montante 69 x 0,52; Omega 12,5 x 0,52; Solera 35 x 0,52; Solera 70 x 0,52; Cantonera 31 x 0,38; Ángulo de Ajuste x 0,38
EPD owner	A.D. Barbieri S.A.
LCA Author	IMPAQTING
Description of the construction product	Non-structural (light) galvanized steel profiles for dry construction, belonging to the Drywall Plus® product family from AD Barbieri SA. These products are used for non-load bearing partitions, ceilings and lining for residential and commercial buildings.
Declared unit:	1 metric ton of each profile
Identification of cosntruction product	Central Product Classification: CPC 41266 Angles, shapes and sections, of alloy steel.
Scope of the declaration	This EPD is based in production data belonging to the period between April 2018 and March 2019, and covers the modules A1 to C4 (cradle to gate with options), without including the optional module D.
Site for which this EPD is representative	AD Barbieri SA manufacturing plant, located at: Luis M. Drago 1382, Almirante Brown, Buenos Aires Province, Argentina.
Intended use of EPD	Communicate information about the potential environmental impacts of the products under study in a transparent way, based on Life Cycle Assessment methodology (LCA).
For more information, refer to	adbarbieri.com
LCA Report issue date	21/12/2020
EPD issue date	12/04/2021
EPD validity date	11/04/2026
Identification of PCR that was used	2012:01 Construction products and construction services Version 2.31

The EPD owner has the sole ownership, liability, and responsibility for the EPD. EPDs within the same product category but from different programmes may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804.

Product description

Drywall Plus® dry construction systems are composed of a variety of galvanized steel profiles used to build non-load bearing partitions, ceilings and lining for residential and commercial buildings. They are certified under standard IRAM-IAS U 500-243, thus guaranteeing the sheet thickness and the required measures.

The galvanized steel sheets used for the profiles have a Z 120 zinc coating, with 120 gr/m2 of zinc on both sides, TST. The characteristics of each of the galvanized steel profiles that are included in this EPD are presented below:

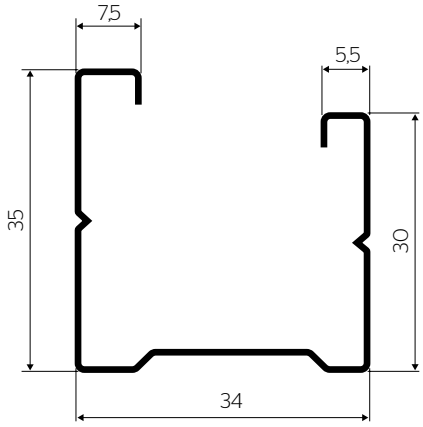
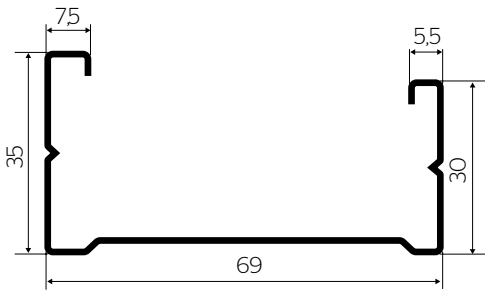
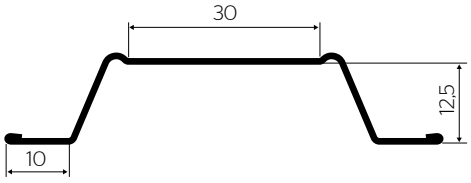
PRODUCT	SHEET THICKNESS (with zinc cover)	SECTION
Montante 34	0,52 mm	
Montante 69	0,52 mm	
Omega 12,5	0,52 mm	

Table 1 - Thickness and section per product

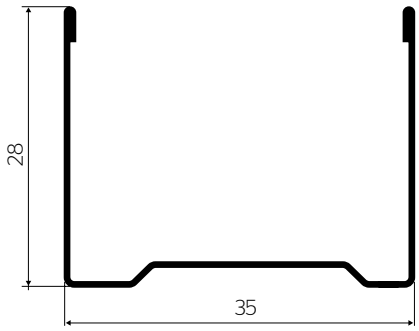
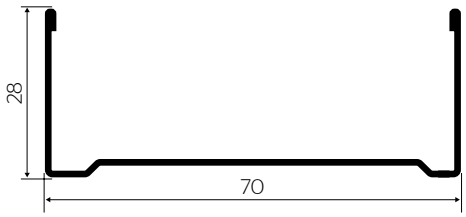
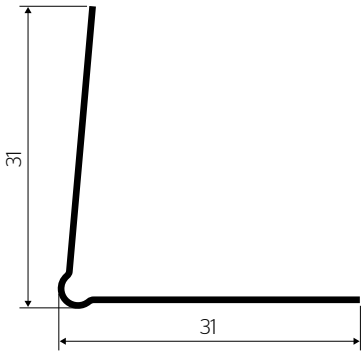
PRODUCT	SHEET THICKNESS (with zinc cover)	SECTION
Solera 35	0,52 mm	
Solera 70	0,52 mm	
Cantonera 31	0,38 mm	
Ángulo de Ajuste	0,38 mm	

Table 1 - Thickness and section per product

5 - Content declaration

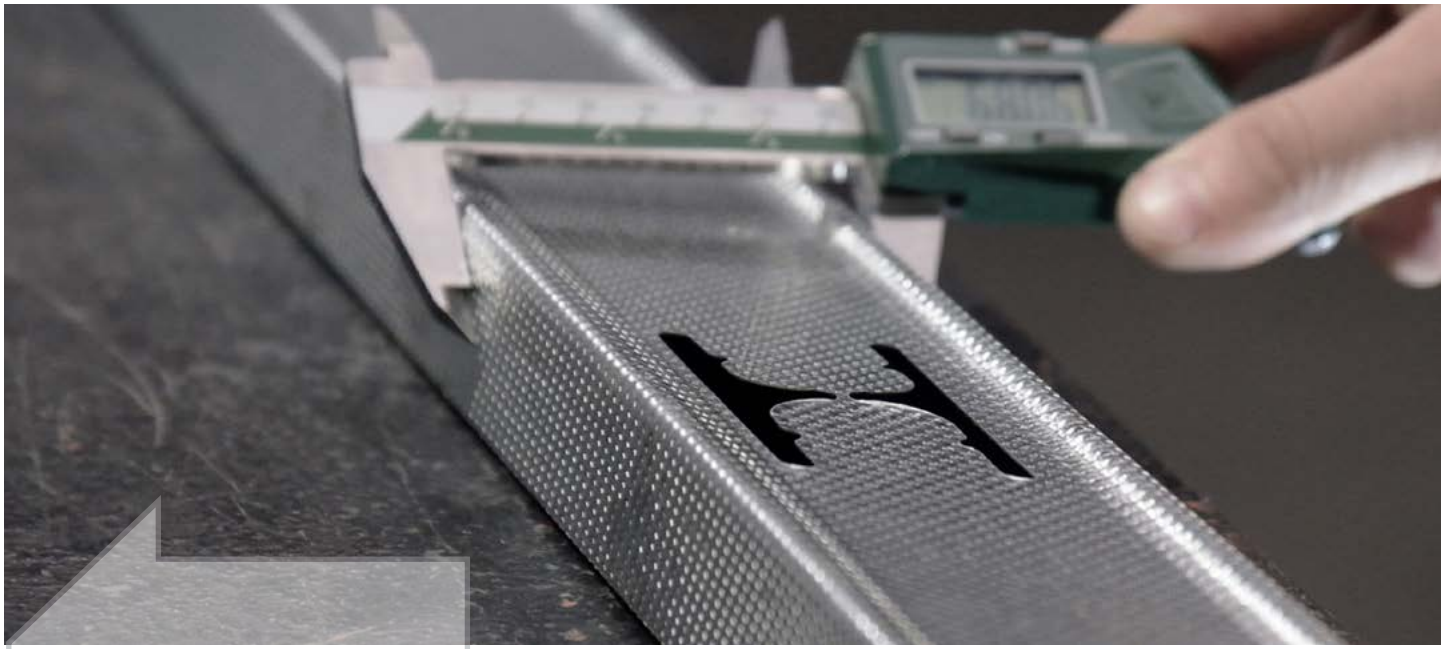
All the products under this EPD use the same hot-dip galvanized steel as only raw material. Therefore, the content declaration is the same for every product.

HOMOGENEOUS MATERIAL OR CHEMICAL SUBSTANCE	FUNTION	WEIGTH
Low-alloyed steel	Structural	> 94%
Zinc	Coating agent	< 5%
Chemical treatment	Adherence of coating agent	< 1%

Table 2 – Typical composition of Galvanized steel used for the profiles.

The products do not contain any hazardous substance listed in the "Candidate List of Substances of Very High Concern (SVHC)"[1] for authorization under the REACH regulation, in a percentage higher than 0,1% of the weight of the product.

[1] https://echa.europa.eu/es/candidate-list-table



6 - LCA calculation information

Potential environmental impacts were calculated:

- According to EN 15804:2012+A1:2013 and PCR 2012:01 Construction products and construction services V2.31.
- Using Life Cycle Assessment (LCA) methodology, according to ISO 14040:2006 and ISO 14044:20016.

An external third-party verification process of the EPD was conducted according to General Programme Instructions for the International EPD® System Version 3.01. Verification includes a documental review and a validation of both the underlying LCA study and documents describing additional environmental information that justify data provided in the EPD.

This EPD is in accordance with ISO 14025:2006.

6.1 - Declared unit

One metric ton of Galvanized steel profile.

6.2 - System boundary

The declared EPD is a "cradle to gate with options" EPD, according to EN 15804:2012+A1:2013 and PCR 2012:01 Construction products and construction services V2.31.

LIFE CYCLE ENVIRONMENTAL INFORMATION OF GALVANIZED STEEL PROFILES																OTHER ENVIRONMENTAL INFORMATION
A1 - A3			A4 - A5		B1 - B7							C1 - C4				D
Product stage			Cosntrution process stage		Use stage							End of life stage				Resource recovery stage
raw materials	transport	manufacturing	transport	cosntruction intallation	use	maintenance	repair	replacement	refurbishment	operational energy use	operational water use	deconstruction, demolition	transport	waste processing	disposal	reuse, recovery, reciclyng potential
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	MND

Table 3 – System boundary. X = included in the LCA.; MND = Module Not Declared.

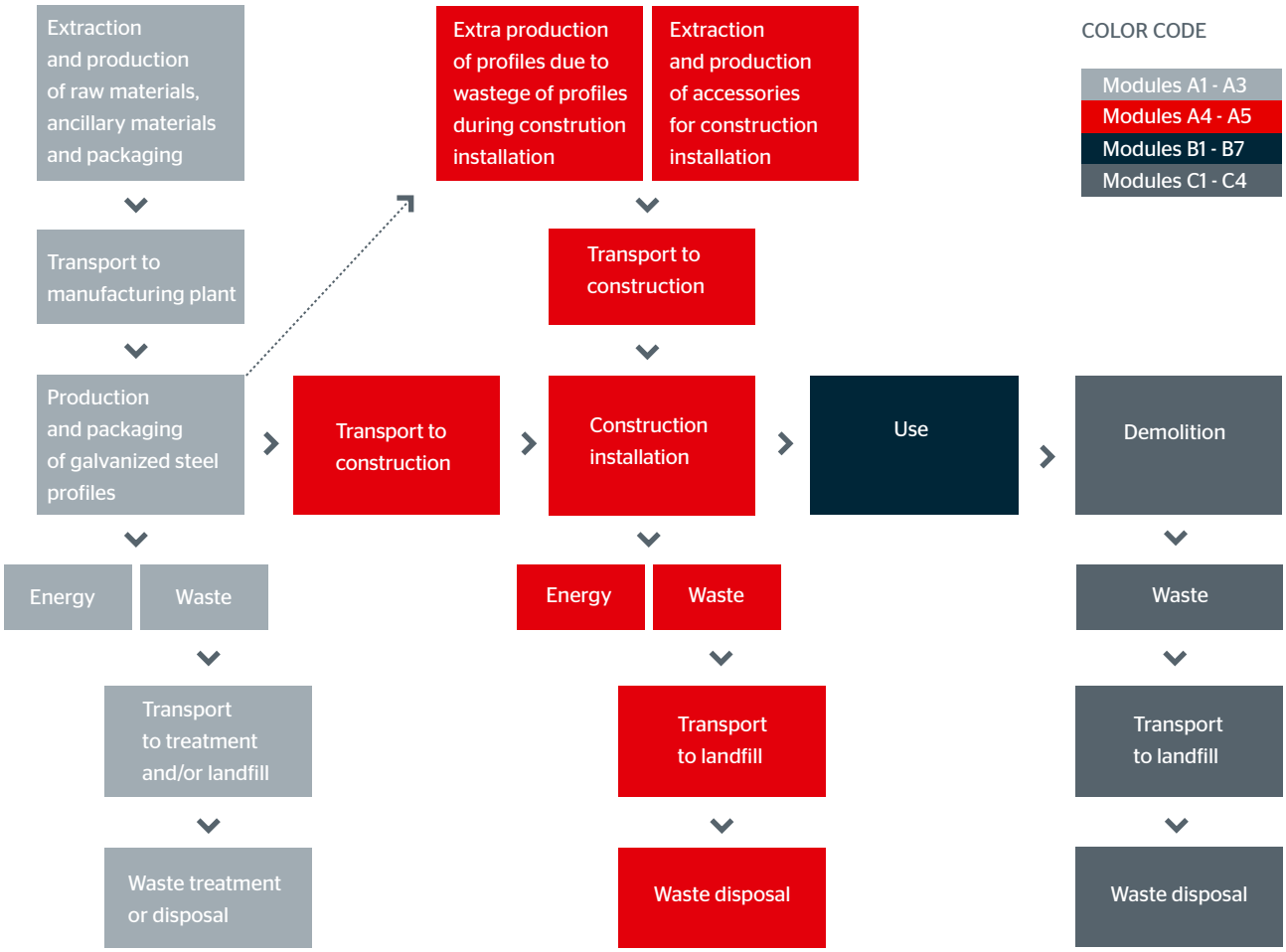


Figure 1 – System boundary with inputs and outputs

6.3 - Reference service life

50 years of service life is considered for the products.

6.4 - Cut-off criteria

A minimum of 99% of the flows of energy and mass of each unit process are included.

The following were kept out of the scope of this study:
- Environmental impact from infrastructure, construction, production equipment, and tools that are not directly consumed in the production process.
- Personnel-related impacts, such as transportation to and from work.

6.5 - Allocation

Allocation of inputs and outputs between product and by-product was based on a mass relation, considering the quantity produced per year of each product and byproduct at the level of unit process.
Steel scrap generated by the manufacturing process in AD Barbieri SA was considered a by-product for allocation purposes since it represents an economic input for the company. Steel scrap is the only by-product produced at the manufacturing facility.

6.6 - Geographical and temporal coverage

Primary data was collected for AD Barbieri SA's manufacturing plant located in Argentina and for the 2018 fiscal year, which includes the period from April 1st 2018 and March 31st 2019.

6.7 - Description of the manufacturing process

Initially, the purchased hot-dip Galvanized steel coils are divided into narrower bands (longitudinal cut). Then, the steel profiles are manufactured through cold roll forming.

Within the same roll forming line, a knurling treatment is performed on 100% of the surface of the steel, which provides higher rigidity, increasing to the maximum the products' flexural strength, without altering its weight. The knurling texture, in turn, causes profiles to be perfectly well fixed, which improves their telescopity and makes their assembly easier.

It is important to highlight that the galvanized steel coils used by AD Barbieri SA are manufactured by an external company through the Blast Furnace – Basic Oxygen Furnace (BF-BOF) route.

The following figure illustrates the production stages in the AD Barbieri SA manufacturing plant.

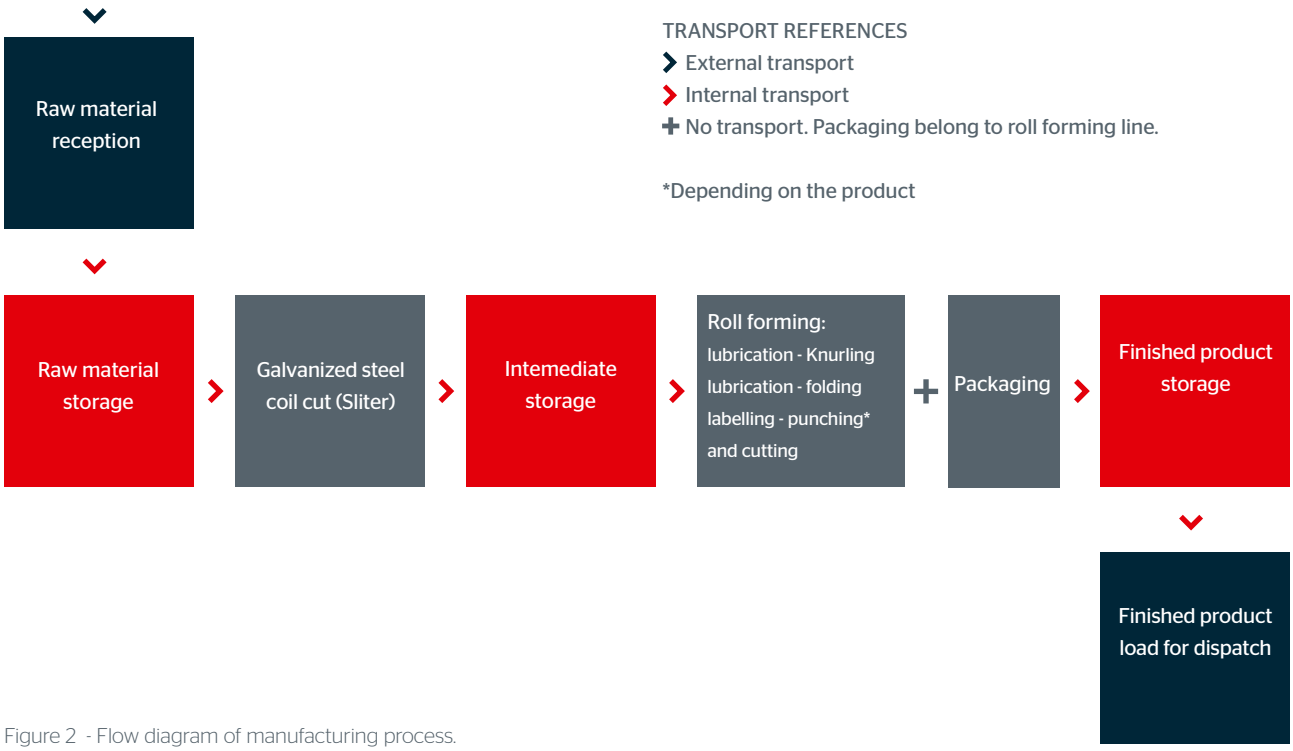


Figure 2 - Flow diagram of manufacturing process.

6.8 - Description of the information modules included in this EPD

6.8.1 PRODUCT STAGE

This stage includes the raw material and energy supply, as well as transport and production of the products. Galvanized steel is the only raw material consumed in the production of the products and it is purchased from an external supplier.

6.8.1.1 A1 - Raw materials supply

This module includes the extraction and processing of raw materials and energy used in the manufacturing process. In particular, it includes:
- *Extraction and processing of raw material:* production of galvanized steel via the BF-BOF production route.
- *Generation and distribution of electricity:* electricity consumption by Slitter machine (longitudinal cut of steel coils), by the cold roll-forming process and by the air compressor.

6.8.1.2 A2 - Transportation to the manufcturing plant

This module includes the transportation from the tier 1 supplier to AD Barbieri SA's manufacturing plant, of the following materials:
- *Raw material:* galvanized steel.
- *Finished product packaging:* plastic bands, wood strips and polyethylene film (not all products use the three packaging materials)
- *Ancillary materials:* hydraulic oil, cleaning product, cleaning cloths, lubricants, finished product printing ink.

Additionally, this module includes the internal transport within AD Barbieri SA's manufacturing plant that is done using a forklift.

6.8.1.3 A3 - Manufacturing

This module includes the inputs and outputs that are consumed/generated due to the manufacturing process in AD Barbieri SA's plant, that were not contemplated in modules A1 and A2.
In particular, it includes:
- *Production of ancillary materials.*
- *Production of finished products' packaging.*
- *Transport of waste generated from the manufacturing plant to the treatment or disposal site.*
- *Treatment and/or disposal of waste, until they reach the end-of-waste state.*

6.8.2 CONSTRUCTION PROCESS STAGE

6.8.2.1 A4 - Transport to the construction site

This module includes the transportation from the production gate to the construction site, and it is calculated based on a scenario, using the parameters described in the following table.

PARAMETER	VALUE - DESCRIPTION
Vehicle type, load capacity, fuel type	Truck, 27tn, Diesel
Distance to construction site	204,15 km
Capacity utilization, including empty returns	80% capacity utilization 51% empty returns
Bulk density of transported products	7850 kg/m3
Volume capacity utilization factor	1

Table 4 – Transport to the construction site scenario.

6.8.2.2 A5 - Construction installation

The following construction installation scenario is considered:
- Installation of products in AMBAR dwelling, designed by Consul Steel[2], with 140m2, with wet wrapping (not in Steel Framing).
- Drywall products under study are used for internal linings and ceilings

[2] http://consulsteel.com/

This module is calculated according to the parameters shown in the following table.

PARAMETRE	VALUE - DESCRIPTION
Ancillary materials for installation	Galvanized steel screws and nylon dowels are consumed (installation accessories)
Water use	No water is used.
Other resource use	No other resources are used.
Quantitative description of energy type and Consumption during the preparation and installation process.	Electricity is used for the electric screw-driver.
Waste materials on the building site, generated by the product's installation; specified by type.	Waste of steel profiles: 0,5% Waste of steel and nylon accessories: 1%
Output materials (specified by type) as a result of waste processing at the construction site e.g. of collection for recycling, for energy recovery, disposal; specified by type.	Waste of steel profiles: to landfill.
	Waste of steel and nylon accessories: to landfill.
	Packaging waste (plastic bands, wood y polyethylene film): to landfill.
Direct emissions to ambient air, soil and water.	No emissions are generated.
Transport of ancillary materials to construction site: type of vehicle.	Truck, 27tn, Diesel.
Transport of ancillary materials to construction site distance.	204,15 km
Transport of waste materials to landfill: type of vehicle.	Dump truck of 10m3 of capacity.
Transport of waste materials to landfill: distance.	25km.

Table 5 – Construction installation scenario.

6.8.3 USE STAGE

The use stage includes the following modules:
- B1: Use
- B2: Maintenance
- B3: Repair
- B4: Replacemenr
- B5: Refurbishment
- B6: Energy use to operate building integrated technical systems
- B7: Operational water use by building integrated technical systems

The products under study do not require technical operations during the use stage. Therefore, the steel profiles do not generate any impact in this stage.

6.8.4 END OF LIFE STAGE

This stage includes the modules that are described in the following sections, and is calculated based on a scenario using the parameters described in Table 6 - End of life scenario.

6.8.4.1 C1 - Deconstruction - demolition

During the demolition of the construction, the dismantling of the profiles is performed. For the products under study, there is no consumption of resources or energy, since the profiles are not unscrewed: the structure is dismantled as is. Waste materials (profiles and accessories) are collected together with other mixed waste construction materials.

6.8.4.2 C2 - Transport

The considerations taken are the same as those described in module A5, for the transport and disposal of waste. Waste materials (profiles and accessories) are transported in a dump truck to a landfill, where the final disposal takes place.

6.8.4.3 C3 - Waste processing

It is considered that the product is sent to landfill without reutilization, recovery or recycling. Therefore, there is no consumption of materials or energy in this module.

6.8.4.4 C4 - Disposal

Considering that the post-consumer collection and recycling of Drywall steel profiles is not technically and economically viable (due to the low mass of the profiles compared to the other components of the demolished structure, such as the plaster sheets), the scenario considered for the disposal of the steel profiles is landfill.

PARAMETRE	VALUE - DESCRIPTION
Collection process specified by type	Waste profiles and accessories are collected together with other mixed waste construction materials.
Recovery system specified by type	There is no recovery, recycling or reuse of the producto once it reaches the end of life.
Disposal specified by type	The profiles, together with other mixed waste construction materials, are sent to landfill.
Assumption for scenario development: transport type	Dump truck of 10m3 of capacity.
Assumption for scenario development: transport distance	Distance to landfill – 25km

Tabla 6 - Escenario de fin de vida útil

7 - Environmental performance

SimaPro 9.1 was used for the Life Cycle Assessment study.

Given that the difference between products in the potential environmental impact for the mandatory impact category Global Warming is lower than 4% concerning the sum of modules A1, A2 and A3, results are presented using the impacts of Montante 34 as representative product, considering that it is the product with highest production and sales volume within the Drywall Plus® product family.

7.1 - Potential environmental impact

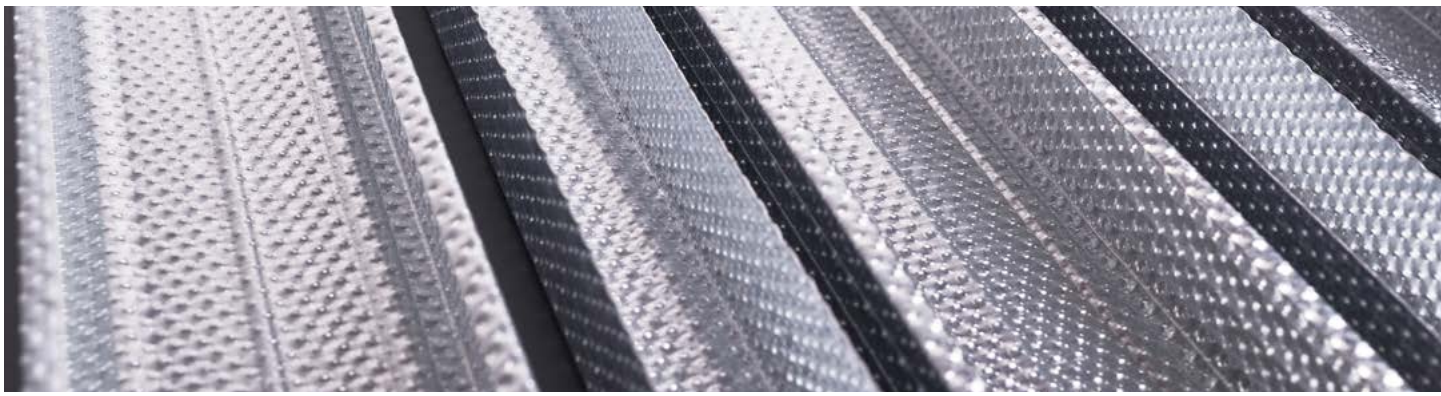
Environmental impact indicators were calculated using CML-IA Baseline V3.06 method, as implemented in SimaPro 9.1.

We do not want to be the best company of the world.
We want to be the best company for the world.

WE CHOOSE TO
RESPECT THE ENVIRONMENT

PRODUCT: Montante 34		PRODUCT STAGE	CONSTRUCTION PROCESS STAGE		USE STAGE							END OF LIFE STAGE				
impact category	unit	A1 - A2 - A3	A4 transport	A5 installation	B1 use	B2 maintenance	B3 repair	B4 replacement	B5 refurbishiment	B6 operational energy use	B7 operational water use	C1 deconstruction, demolition	C2 transport	C3 waste treatment	C4 disposal	D reuse, recovery, reciclyng potential
Abiotic depletion	kg Sb eq	3,03	3,23E-04	0,03	0	0	0	0	0	0	0	0	4,21E-05	0	5,15E-05	MND
Abiotic depletion (fossil fuels)	MJ	31.870,50	294,69	4.086,94	0	0	0	0	0	0	0	0	38,38	0	155,66	MND
Global warming	kg CO2 eq	2.984,59	19,20	312,11	0	0	0	0	0	0	0	0	2,50	0	5,51	MND
Ozone layer depletion	kg CFC-11 eq	1,82E-04	3,53E-06	2,09E-05	0	0	0	0	0	0	0	0	4,60E-07	0	1,84E-06	MND
Photochemical oxidation	kg C2H4 eq	1,68	3,39E-03	0,06	0	0	0	0	0	0	0	0	3,76E-04	0	1,69E-03	MND
Acidification	kg SO2 eq	22,85	0,10	1,18	0	0	0	0	0	0	0	0	0,01	0	0,04	MND
Eutrophication	kg PO4--- eq	9,88	0,02	0,29	0	0	0	0	0	0	0	0	3,11E-03	0	0,01	MND

Table 7 – Potential environmental impact per metric ton of product.



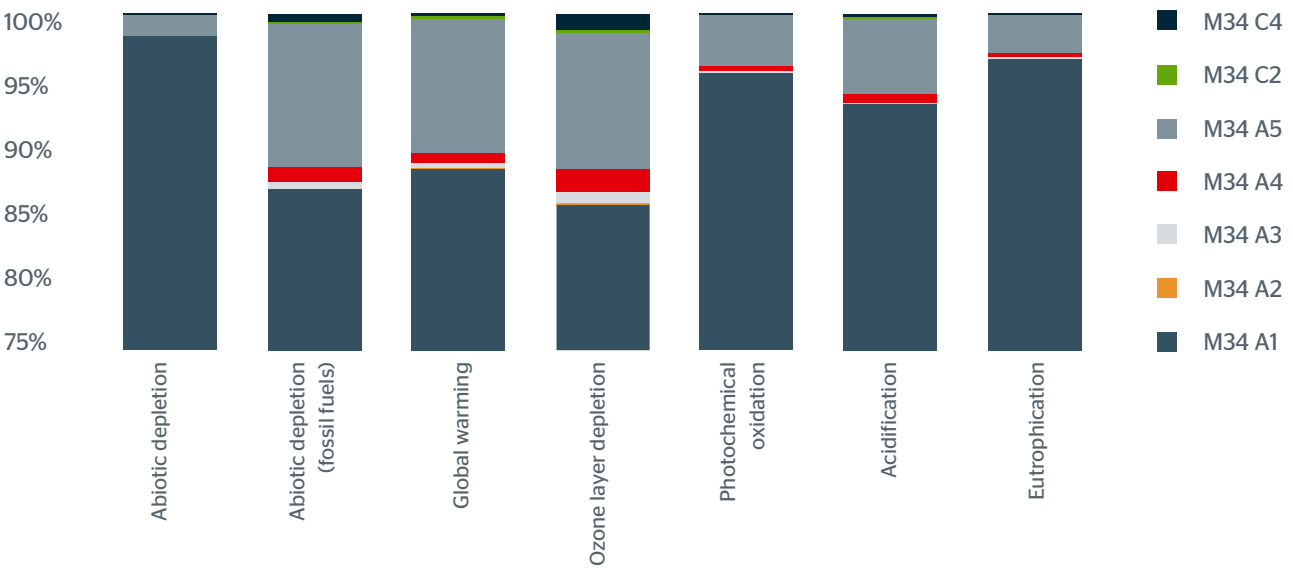
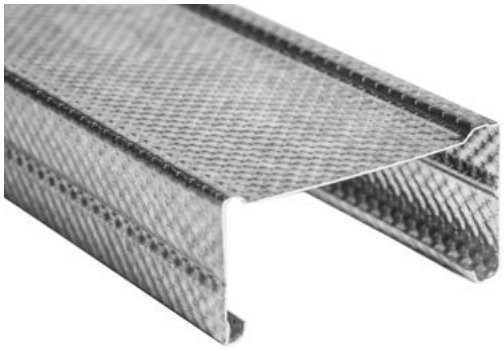


Figure 3 – Potential environmental impact contribution of each module, per metric ton of product.



7.2 - Resource use

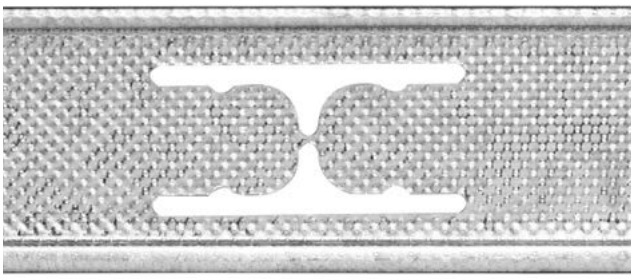
Parameters describing resource use per ton of product were calculated using the Cumulative Energy Demand (LHV) V1.00 method, as implemented in SimaPro 9.1, except for the parameter of use of net fresh water that was calculated using ReCiPe 2016 Midpoint (H) V1.04 method, as implemented in SimaPro 9.1.

PRODUCT: Montante 34		PRODUCT STAGE	CONSTRUCTION PROCESS STAGE		USE STAGE							END OF LIFE STAGE				
parametre	unit	A1 - A2 - A3	A4 transport	A5 installation	B1 use	B2 maintenance	B3 repair	B4 replacement	B5 refurbishment	B6 operational energy use	B7 operational water use	C1 deconstruction, demolition	C2 transport	C3 waste processing	C4 disposal	D reuse, recovery, reciclyng potential
Use of renewable primary energy excluding renewable primary energy resources used as raw materials.	MJ	3.829,82	3,18	559,50	0	0	0	0	0	0	0	0	0,41	0	1,28	MND
Use of renewable primary energy resources used as raw materials.	MJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	MND
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ	3.829,82	3,18	559,50	0	0	0	0	0	0	0	0	0,41	0	1,28	MND
Use of non- renewable primary energy excluding non- renewable primary energy resources used as raw materials.	MJ	2.217,72	298,84	1.869,10	0	0	0	0	0	0	0	0	38,92	0	57,32	MND
Use of non- renewable primary energy resources used as raw materials.	MJ	31.497,35	0	2.676,04	0	0	0	0	0	0	0	0	0	0	0	MND
Total use of non- renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ	33.715,07	298,84	4.545,14	0	0	0	0	0	0	0	0	38,92	0	157,32	MND
Use of secondary material	kg	125,01	0	21,83	0	0	0	0	0	0	0	0	0	0	0	MND
Use of renewable secondary fuels	MJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	MND
Use of non-renewable secondary fuels	MJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	MND
Use of net fresh water	m3	35,87	0,04	8,07	0	0	0	0	0	0	0	0	4,68E-03	0	0,17	MND

Table 8 – Resource use indicators per metric ton of product.

7.3 - Waste categories

Parameters describing waste categories were calculated using EDIP 2003 V1.07 method, as implemented in SimaPro 9.1.
It is worth highlighting that no radioactive waste is produced in AD Barbieri SA's operations, and that the results obtained in this category correspond to processes modeled through Ecoinvent 3.6 database.

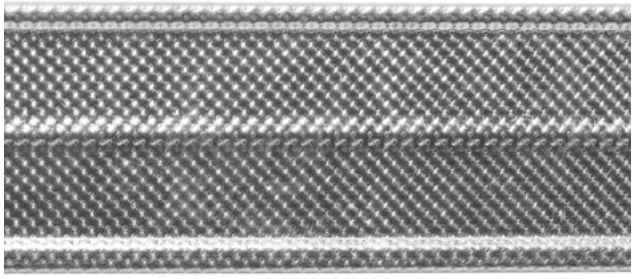


PRODUCT: Montante 34		PRODUCT STAGE	CONSTRUCTION PROCESS STAGE		USE STAGE							END OF LIFE STAGE				
parametre	unit	A1 - A2 - A3	A4 transport	A5 installation	B1 use	B2 maintenance	B3 repair	B4 replacement	B5 refurbishment	B6 operational energy use	B7 operational water use	C1 deconstruction, demolition	C2 transport	C3 waste processing	C4 diposal	D reuse, recovery, reciclyng potential
Hazardous waste disposed	kg	0,57	7,33E-04	0,01	0	0	0	0	0	0	0	0	9,54E-05	0	2,35E-04	MND
Non-hazardous waste disposed	kg	1.121,02	25,29	81,98	0	0	0	0	0	0	0	0	3,29	0	1.068,47	MND
Radioactive waste disposed	kg	0,08	1,99E-03	0,02	0	0	0	0	0	0	0	0	2,59E-04	0	1,03E-03	MND

Table 9 – Waste categories indicators per metric ton of product.

7.4 - Other output flows

Parameters describing other output flows were calculating using the Life Cycle Inventory and using data of energy generation during the incineration of waste, which is detailed in the process description of the Ecoinvent 3.6 datasets.



PRODUCT: Montante 34		PRODUCT STAGE	CONSTRUCTION PROCESS STAGE		USE STAGE							END OF LIFE STAGE				
parametre	unit	A1 - A2 - A3	A4 transport	A5 installation	B1 use	B2 maintenance	B3 repair	B4 replacement	B5 refurbishment	B6 operational energy use	B7 operational water use	C1 deconstruction, demolition	C2 transport	C3 waste processing	C4 disposal	D reuse, recovery, reciclyng potential
Components for re-use	kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	MND
Materials for recyling	kg	1,86	0	0,01	0	0	0	0	0	0	0	0	0	0	0	MND
Materials for energy recovery	kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	MND
Exported energy	MJ	64,26	0	52,70	0	0	0	0	0	0	0	0	0	0	0	MND

Table 10 - Other output flows indicators per metric ton of product.

7.5 - Interpretation

Figure 4 - Interpretation of environmental impact indicators for 1 metric ton of product. (1) Corresponds to total use of primary energy (2) Corresponds to use of net fresh water.

Potential environmental impact

Module A1 is the module that has the greatest contribution to the potential environmental impact in all impact categories: as a minimum, it contributes to generate 87% of the potential environmental impact in all impact categories. Within module A1, the process that is responsible for the greatest proportion of the environmental impact is steel production, done via the BF-BOF route.
The module that generates the second greatest contribution to the potential environmental impact is module A5, and this is because this module includes the additional production of galvanized steel due to the generation of steel profiles waste during construction installation and due to the use of steel accessories during construction installation.
Therefore, **steel production is the process that contributes the most to the potential environmental impact in all impact categories.**

Resource use

When analyzing the indicators of total use of primary energy resources and use of net fresh water, it can be concluded that, once again, module A1 is the module that contributes the most to the resource use. Within module A1, steel production is the process that generates the highest resource use.

We choose to be main characters of change.

WE CHOOSE TO
EVOLVE

7.6 - Aditional environmental information

BARBIERI HAS THE FOLLOWING CERTIFICATIONS

ISO 14001:2015: Production and Sale of Drywall Profiles, Steel Frame and Steel Shape and its appliances, Production of Perfilplas ceilings and coatings, Regular Perfilplas PVC Curtains, Adjustables Perfilplas PVC Curtains, Ironworks, and automation for Roll Up Curtains. [1]

ISO 9001:2015: Production and Sale of Drywall Profiles, Steel Frame and Steel Shape and appliances. [2]

Environmental management policy

Barbieri is committed to the world's harmonic and sustainable development, actively protecting the environment. This way, to meet this environmental commitment with the planet's care as a priority, our company defines its actions with the following guidelines:
- To avoid pollution by encouraging as little use as possible of natural resources, avoiding their deterioration and contamination.
- To constantly improve our company's processes and products with the goal of creating a better future.
- To educate our community and to foster and communicate this policy and actions arising from them to contribute to developing a cooperative, committed, equal society living in balance with nature.

Policy of company's safety and health management

Barbieri understands that its contributors' safety and health is a priority. Therefore, to meet this goal our company's actions are focused on:
- Promoting learning and security spaces for all individuals to feel fulfilled, safe, and key members of the company.
- Demonstrating that the company's daily actions and decisions are guided by the company's values: commitment, passion, integration, honesty, and sustainability

Innovation policy

Barbieri seeks to maximize a high triple-impact goal using the market's strength as a way to grow.
The innovation approach is open, focused on developing a culture leaned to a shared vision with innovation skills for businesses, processes, solutions, and services.

8 - Verification and registration

Programme	International EPD® System www.environdec.com	EPD®
Programme operator	EPD International AB / Box 210 60 / SE-100 31 Stockholm, Sweden	
EPD registration number	S-P-03537	
Date of publication (issue)	12/04/2021	
Date of validity	11/04/2026	
PCR	2012:01 Construction products and construction services Versión 2.31	
PCR review was conducted by	The Technical Committee of the International EPD® System. Chair: Massimo Marino. Contact via: info@environdec.com	
Independent verification of the declaration and data, according to ISO 14025	EPD Process Certification (interno) EPD Verification (external)	☐ ☑
Third-party verifier **Approved by**	Bárbara Civit - barbaracivit@gmail.com The International EPD ® System	

9 - Contact information

EPD owner

BARBIERI

A.D. Barbieri S.A.
A.D. Barbieri (ex Luis María Drago) 1382, Almirante Brown,
Provincia de Buenos Aires, Argentina.
adbarbieri.com

Contact: Juan Francisco Barbieri - juanfrancisco@adbarbieri.com.ar

---

LCA Author

IMPAQTING

IMPAQTING
www.impaqting.com

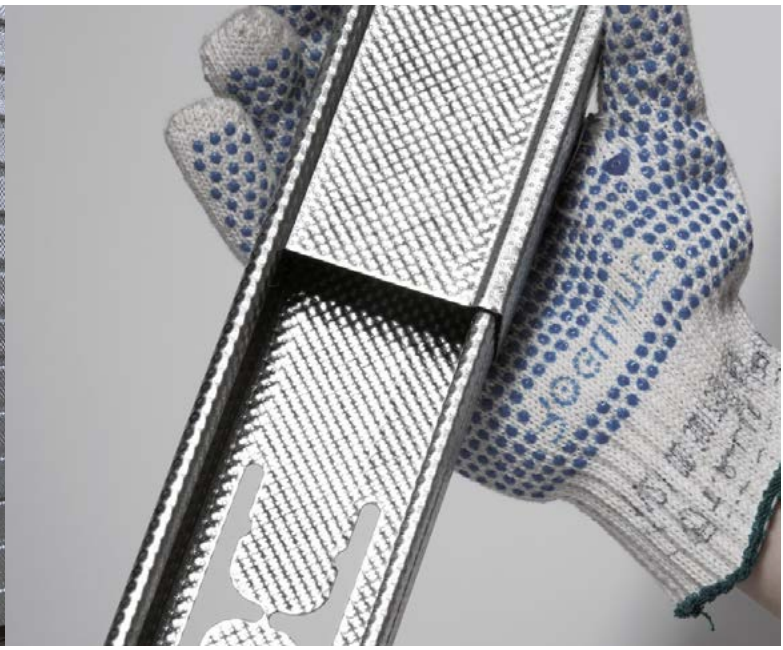
Contact: Luciana Saporiti - luciana.saporiti@impaqting.com

Programme Operator

EPD®

EPD International AB
BOX 210 60, SE-100 31 Estocolmo, Suecia
www.environdec.com

Contact: info@environdec.com



10 - Bibliography

- UN Central Product Classification (CPC)
https://unstats.un.org/unsd/classifications/unsdclassifications/cpcv21.pdf

- ISO 14040:2006: Environmental Management-Life Cycle Assessment-Principles and framework.

- ISO 14044:2006: Environmental Management-Life Cycle Assessment-Requirements and guidelines.

- ISO 14025:2006: Environmental labels and declarations-Type III Environmental Declarations-Principles and procedures.

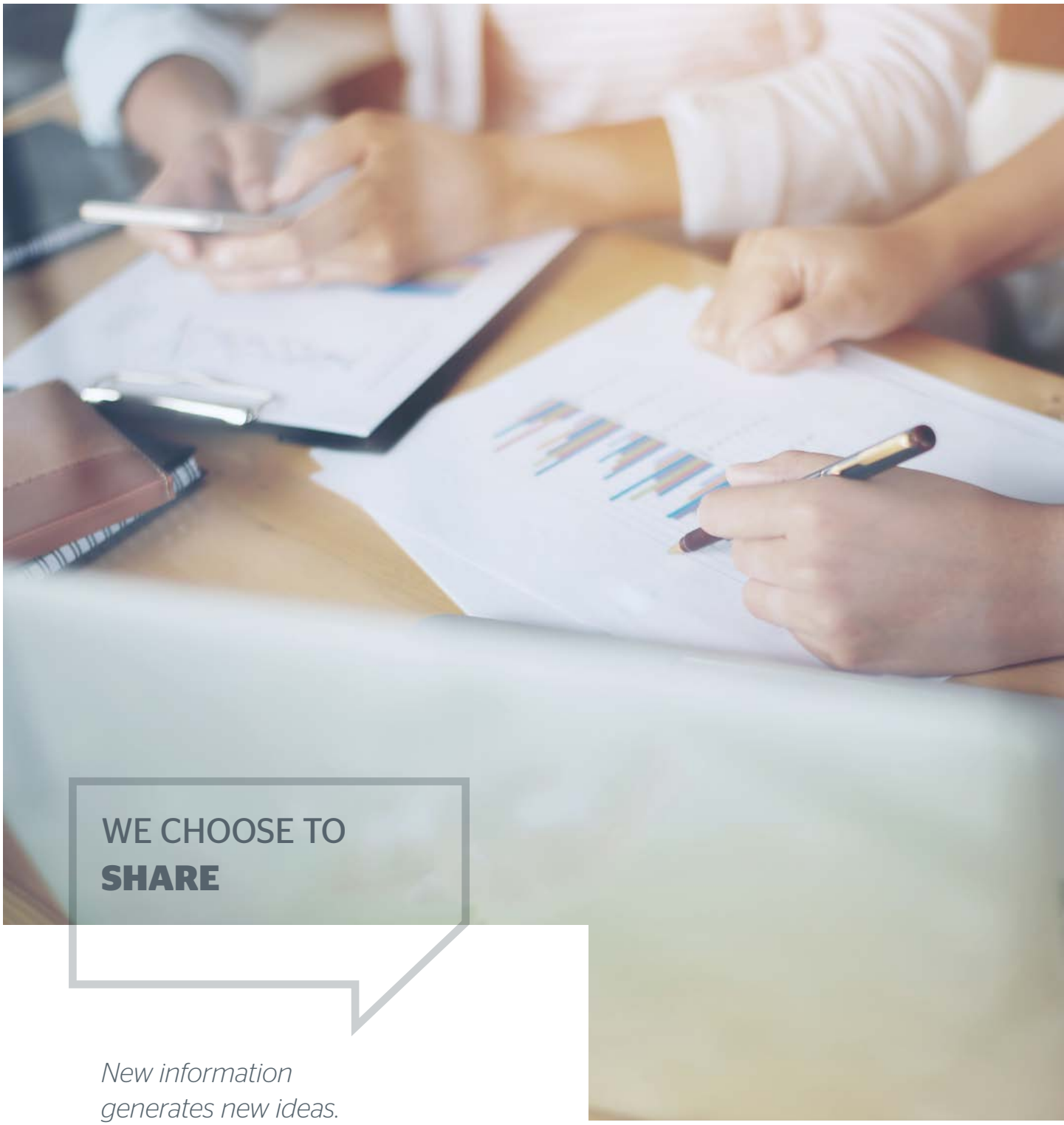
- PCR 2012:01 Construction products and construction services Version 2.31

- EN 15804:2012+A1:2013: Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products

- General Programme instructions of the International EPD® System, Version 2.5.

- Reporte completo ACV "Análisis de Ciclo de Vida para productos seleccionados de la familia Drywall Plus®

ZOOMED TABLES



6.2 - System boundary

LIFE CYCLE ENVIRONMENTAL INFORMATION OF GALVANIZED STEEL PROFILES																OTRA INFORMACIÓN AMBIENTAL
A1 - A3			A4 - A5		B1 - B7							C1 - C4				D
Product stage			Construction process satge		Use stage							End of life stage				Resource recovery stage
raw materiales	transport	manufacturing	transport	construction installation	use	maintenance	repair	replacement	refurbishment	operational energy use	operational water use	deconstruction, demolition	transport	waste pro-cessing	disposal	reuse, recovery, reciclyng potential
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	MND

Table 3 - System boundary. X = included in the LCA.; MND = Module Not Declared.

BACK

7.1 - Potential environmental impact

PRODUCT: Montante 34		PRODUCT STAGE	CONSTRUCTION PROCESS STAGE		USE STAGE							END OF LIFE STAGE				
impact category	unit	A1 - A2 - A3	A4 transport	A5 intallation	B1 use	B2 maintenance	B3 repair	B4 replacement	B5 refurbishiment	B6 operational energy use	B7 operational water use	C1 deconstruction, demolition	C2 transport	C3 waste processing	C4 disposal	D reuse, recovery, reciclyng potential
Abiotic depletion	kg Sb eq	3,03	3,23E-04	0,03	0	0	0	0	0	0	0	0	4,21E-05	0	5,15E-05	MND
Abiotic depletion (fossil fuels)	MJ	31.870,50	294,69	4.086,94	0	0	0	0	0	0	0	0	38,38	0	155,66	MND
Global warming	kg CO2 eq	2.984,59	19,20	312,11	0	0	0	0	0	0	0	0	2,50	0	5,51	MND
Ozone layer depletion	kg CFC-11 eq	1,82E-04	3,53E-06	2,09E-05	0	0	0	0	0	0	0	0	4,60E-07	0	1,84E-06	MND
Photochemical oxidation	kg C2H4 eq	1,68	3,39E-03	0,06	0	0	0	0	0	0	0	0	3,76E-04	0	1,69E-03	MND
Acidification	kg SO2 eq	22,85	0,10	1,18	0	0	0	0	0	0	0	0	0,01	0	0,04	MND
Eutrophication	kg PO4--- eq	9,88	0,02	0,29	0	0	0	0	0	0	0	0	3,11E-03	0	0,01	MND

Table 7 - Potential environmental impact per metric ton of product.

BACK

7.2 - Resource use

PRODUCT: Montante 34		PRODUCT STAGE	CONSTRUCTION PROCESS STAGE		USE STAGE							END OF LIFE STAGE				
parametre	unit	A1 - A2 - A3	A4 transport	A5 installation	B1 use	B2 maintenance	B3 repair	B4 replacement	B5 refurbishment	B6 operational energy use	B7 operational water use	C1 deconstruction, demolition	C2 transport	C3 waste processing	C4 diposal	D reuse, recovery, reciclyng potential
Use of renewable primary energy excluding renewable primary energy resources used as raw materials.	MJ	3.829,82	3,18	559,50	0	0	0	0	0	0	0	0	0,41	0	1,28	MND
Use of renewable primary energy resources used as raw materials.	MJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	MND
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ	3.829,82	3,18	559,50	0	0	0	0	0	0	0	0	0,41	0	1,28	MND
Use of non- renewable primary energy excluding non- renewable primary energy resources used as raw materials.	MJ	2.217,72	298,84	1.869,10	0	0	0	0	0	0	0	0	38,92	0	157,32	MND
Use of non- renewable primary energy resources used as raw materials.	MJ	31.497,35	0	2.676,04	0	0	0	0	0	0	0	0	0	0	0	MND
Total use of non- renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ	33.715,07	298,84	4.545,14	0	0	0	0	0	0	0	0	38,92	0	157,32	MND
Use of secondary material	kg	125,01	0	21,83	0	0	0	0	0	0	0	0	0	0	0	MND
Use of renewable secondary fuels	MJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	MND
Use of non-renewable secondary fuels	MJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	MND
Use of net fresh water	m3	35,87	0,04	8,07	0	0	0	0	0	0	0	0	4,68E-03	0	0,17	MND

Table 8 – Resource use indicators per metric ton of product.

BACK

7.3 - Waste categories

PRODUCT: Montante 34		PRODUCT STAGE	CONSTRUCTION PROCESS STAGE		USE STAGE							END OF LIFE STAGE				
parametre	unit	A1 - A2 - A3	A4 transport	A5 installation	B1 use	B2 maintenance	B3 repair	B4 replacement	B5 refurbishment	B6 operational energy use	B7 operational water use	C1 deconstruction, demolition	C2 transport	C3 waste processing	C4 disposal	D reuse, recovery, reciclyng potential
Hazardous waste disposed	kg	0,57	7,33E-04	0,01	0	0	0	0	0	0	0	0	9,54E-05	0	2,35E-04	MND
Non-hazardous waste disposed	kg	1.121,02	25,29	81,98	0	0	0	0	0	0	0	0	3,29	0	1.068,47	MND
Radioactive waste disposed	kg	0,08	1,99E-03	0,02	0	0	0	0	0	0	0	0	2,59E-04	0	1,03E-03	MND

Table 9 - Waste categories indicators per metric ton of product.

BACK

7.4 - Other output flows

PRODUCT: Montante 34		PRODUCT STAGE	CONSTRUCTION PROCESS STAGE		USE STAGE							END OF LIFE STAGE				
parametre	unit	A1 - A2 - A3	A4 transport	A5 installation	B1 use	B2 maintenance	B3 repair	B4 replacement	B5 refurbishment	B6 operational energy use	B7 operational water use	C1 deconstruction, demolition	C2 transport	C3 waste processing	C4 disposal	D reuse, recovery, reciclyng potential
Components for re-use	kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	MND
Materials for recyling	kg	1,86	0	0,01	0	0	0	0	0	0	0	0	0	0	0	MND
Materials for energy recovery	kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	MND
Exported energy	MJ	64,26	0	52,70	0	0	0	0	0	0	0	0	0	0	0	MND

Table 10 - Other output flows indicators per metric ton of product.

BACK

BARBIERI

AD Barbieri 1382 (Ex Luis M. Drago) · B1852LGP
Parque Ind. Almirante Brown
Burzaco · Buenos Aires · Argentina
Tel: (5411) 4136-4000

industrias@adbarbieri.com
adbarbieri.com