Tarimatec

ENVIRONMENTAL PRODUCT DECLARATION

TARIMATEC Deck Hueca, Deck Maciza, Vertical Mont Blanc, Vertical Annapurna, Vertical Aris and Perfil de terminacion.

In accordance with ISO 14025 and UNE-EN 15804:2012+A2:2020 for:



Plásticos Viters, S.A.
Parque empresarial, Oller St, 30 (46980)
Paterna, Valencia - Spain. Scope: Global

Programme:
The International EPD® System,
www.environdec.com

Programme operator:
EPD International AB

EPD registration number: S-P-07588
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An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at www.environdec.com





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EPD®



General information

Programme information

Programme: The International EPD® System

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SE-100 31 Stockholm, Sweden

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CEN standard UNE-EN 15804 serves as the Core Product Category Rules (PCR)

Product category rules (PCR): Construction Products,
PCR 2019:14 (UNE-EN 15804:A2), version 1.11.

PCR review was conducted by:

Claudia A. Peña. The review panel may be contacted via info@environdec.com

Independent third-party verification of the declaration and data, according to ISO 14025:2010:

- ○ EPD process certification
- ◉ EPD verification

Third party verifier:
TECNALIA R&I CERTIFICACIÓN S.L.
info@tecnaliacertificacion.com
Approved by: ENAC. Accreditation N°125/C-PR283

Procedure for follow-up of data during EPD validity involves third party verifier:

- ◉ Yes
- ○ No

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 UNE-EN 15804:2012+A2:2020. For further information about comparability, see UNE-EN 15804 and ISO 14025. The verifier and the operator of the programme have no responsibility for the legality of the product, with the technical support provided by ISOLANA AHORRO ENERGETICO SL.



Description of the organisation:

Plastics Viters S.A. is a company dedicated to the extrusion of plastic profiles and tubes with more than 65 years of experience in the sector. This experience is linked to an innovative character and a firm commitment to the most modern and capable production equipment. All this makes Plásticos Viters S.A. be, without a doubt, one of the most capable extrusion companies to carry out any project tailored to its clients, as is proven by the more than 1,250 different products it manufactures. Plásticos Viters has extensive experience, not only in the extrusion process of tubes and profiles, but also in the design and formulation of its dry blend, which is a mixture of raw materials used to manufacture its profiles.

Our ISO 9001:2015 quality system, certified by AENOR, is one of the pillars on which the company's strategy is based.

With the invaluable help of our customers, we are leaders in some applications for the construction and rehabilitation sector and the field of application of the products we manufacture extends across a wide variety of sectors and countries.

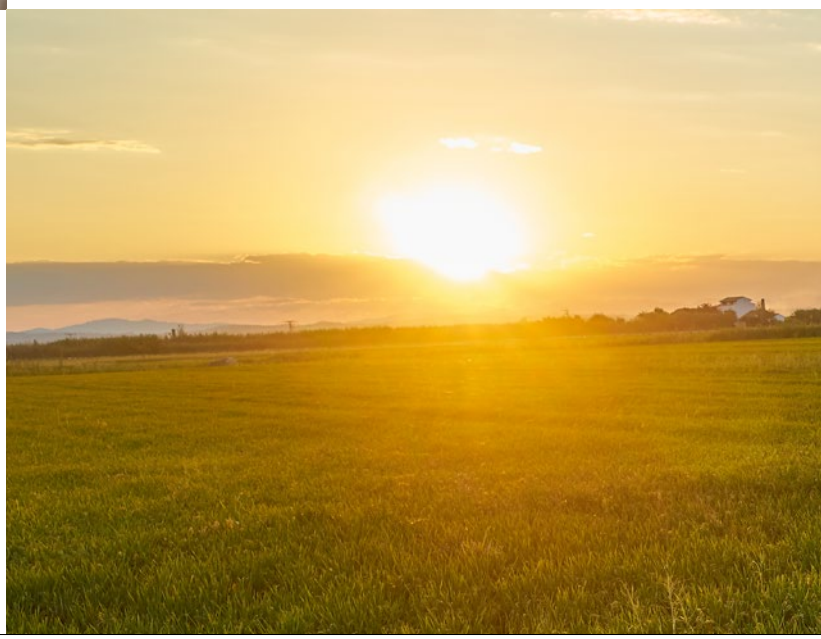
At the end of the 90s, our R&D department created Plasticwood®, Tarimatec's raw material, is a WPC (Wood Plastic Composite) that is mainly composed of:

- Polyvinylchloride
- Rice husk
- Limestone

Company information

Owner of the EPD:
Plásticos Viters, S.A

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Polyvinyl chloride has been shown, with the number of products that it is present, to be a polymer with excellent properties in the world of construction, and five of the main characteristics of the products made with this polymer are:

Safety
Polyvinyl chloride is a completely safe and inert material and, precisely because of this characteristic, it is used in sectors that require a high degree of purity and quality, such as, for example, the health sectors (eg. blood bags, drip bags, etc.) and food (e.g. food film, bottles, etc.). This makes it a safe material.

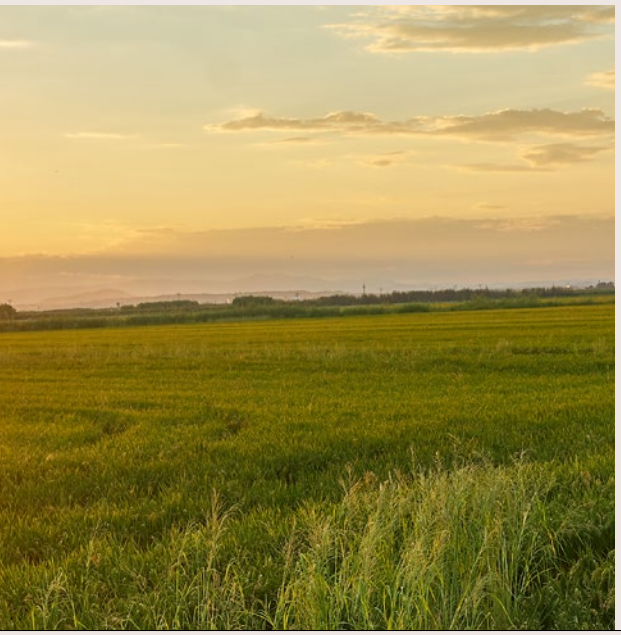
Oil content:
Compared to other polymers, Polyvinyl Chloride only has 43% oil compared to 100% of others, such as Polyethylene (PE). The rest, 57%, comes from sea salt, which is an inexhaustible resource.

Resistance:
It is the polymer with the best technical properties on the market, proof of this is its majority presence in the world of construction, being the material with the best guarantee for uses in which it will be subjected to inclement weather and solar radiation. , due to being outdoors (e.g. window frames, blinds, facade cladding, interior and exterior tubes, geotextile sheets, etc.).

Excellent behavior against fire:
It is a practically fire-retardant material, since it is self-extinguishing and, although it may soften with the action of fire, it does not drip, which makes it the safest polymer from the point of view of behavior against fire. In short, it does not contribute to the spread of fire and its use is fully recommended when seeking an excellent classification in this regard.

Recyclability: It is 100% recyclable.
From its recycling, it can be incorporated for the manufacture, either of the same profile, or any other, such as tubes, cable coatings, shoe soles, tiles, floors, etc.

It is 100% recyclable



The main feature of Plasticwood is that its formulation incorporates a vegetable fiber. This vegetable fiber does not come directly or indirectly from the felling of trees, nor from wood residues of other products, whose primary origin has been this felling of trees. The vegetable fiber of Plasticwood is the rice husk, thus carrying out, no longer a recycling, but a **DIRECT RECOVERY OF A WASTE.**

At Tarimatec we have already r**ecovered more than 5,000,000 kg of this waste** which, in addition to the great positive impact from an environmental point of view, **provides excellent physical properties** to our products, such as hardness, low water absorption and also resistant to the attack of microorganisms, woodworm and rodents.

The **proportion** of rice husks in the formulation is notable, incorporating **50 parts of rice husks for every 100 parts of Polyvinyl Chloride.**



In addition to rice husks and polyvinyl chloride, the other main component is crushed limestone (CaCO3), such as Aragonite or Marble, providing this raw material with excellent physical properties such as hardness, resistance to bending and impact resistance, also behaving as an excellent natural fungicide.

The proportion of crushed limestone is also significant, since 40 parts of limestone are incorporated in its formulation for every 100 parts of polyvinyl chloride.

Although we value a waste such as rice husk,	is there any part of recycled material in its composition?	**The answer is YES.**

If we go to the proportions of the different components of its composition, Tarimatec is manufactured with:

- **64% dry blend Plasticwood.**
- **22.5% of WPC recovered** from production waste, cuts from installations and material recovered at the end of its useful life, with a total quality guarantee.
- **10.5% of the chips obtained from the brushing/sanding process** of the manufacturing process, which are incorporated again, instead of going to landfill, thus performing a double recovery of a waste, and eliminating the carbon footprint for transportation and management.

We are also committed to a **sustainable manufacturing** and composition process, and this is not only a statement of intent, but a statement of facts that is demonstrated by the company's environmental policy, which, in addition to the **certification ISO 9001: 2015** verified **by AENOR**, is in the implementation and integrated certification of this with **ISO 14001:2015.**

This is possible, among other reasons, by the commitment of proximity raw material suppliers.

All the suppliers of the raw materials necessary for the manufacture of Tarimatec products are 100% national, many of them being local suppliers, which means that the carbon footprint for transporting the raw materials is smaller than if they had what to import

This means that we **do not import and market products manufactured thousands of kilometers away,** as is the case with profiles of Asian origin marketed in Spain and Europe. We are manufacturers, and we manufacture here, in Spain, in Valencia, but not only Tarimatec profiles, we also formulate and manufacture our raw material, our dry blend (Plasticwood), this means that, unlike other producers of WPC profiles that work With pellets manufactured from dry blend, we transform our dry blend directly into a product, saving an extrusion process to manufacture intermediate pellets, which means that we consume half the electrical energy of those who manufacture using pellets. Tarimatec consumes approximately half the electrical energy to obtain a profile, than that consumed by another manufacturer that uses pellets in its extrusion process, since one less process is carried out.

And where does the energy with which we manufacture our products come from?

According to the data provided by our marketer in 2020, almost **60% of the energy with which we manufacture our products is renewable (56.8%).**

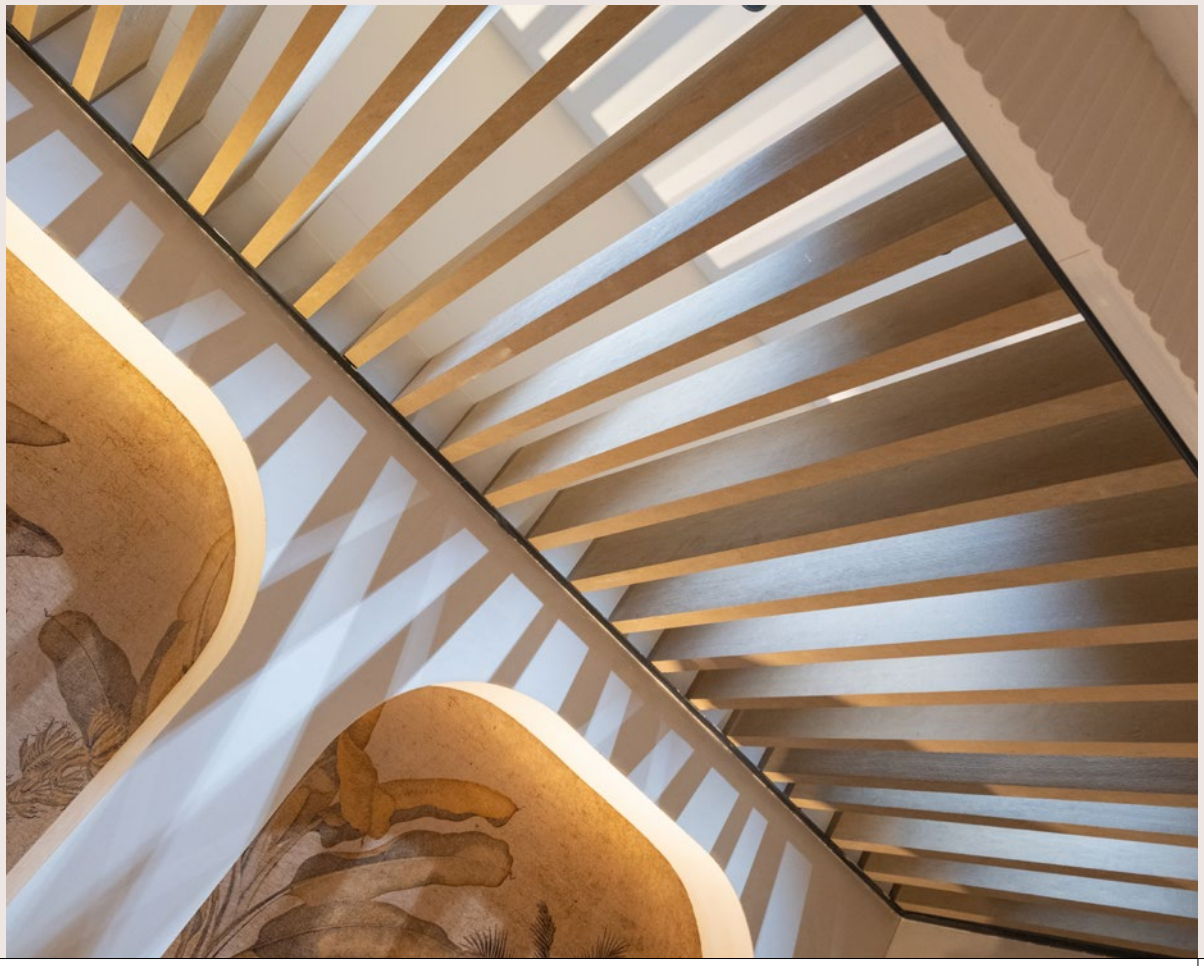
Another strong point of Tarimatec is **DURABILITY**, it is just as important that a **product be RECYCLABLE** (the entire range of TARIMATEC products are recyclable, not only their profiles, but all their accessories and components) as well as that it be **DURABLE.**

Thanks to its composition and quality of its raw material, Tarimatec is designed and formulated so that it has a **useful life of more than 25 years**, with a 15-year guarantee, as stated in its technical manual, therefore, they will pass many years until it has to be subjected to a dismantling and recycling process.

For all the ARGUMENTS, **Tarimatec** is a **highly valued product in all those projects** in which an environmental certification is sought, such as **LEED, BREAM or GREEN.**

This document will be used for B2B communication, and a global scope can be considered.

Name and location of production site: Parque empresarial, Oller St, 30 (46980) Paterna, Valencia - Spain.



Product information

Product name:

Tarimatec Deck Hueca y Maciza, Tarimatec Vertical Mont Blanc, Tarimatec Vertical Annapurna, Tarimatec Vertical Aris y Tarimatec Perfil de terminacion (End-profile).

Product description:

Tarimatec is a range of products made from WPC (PlasticWood), whose main composition is polymer (PVC), vegetable fibers (rice husk) and ground Calcite. This product range offers a global solution for floor, wall and ceiling cladding, as well as versatile products such as the Annapurna range, which can be used for fences and even furniture manufacturing.

- IMPACT RESISTANCE AND ABRASION
- HIGH FIRE RESISTANCE
- WILL NOT CRACK, SPLINTER OR FRAYS
- DOES NOT REQUIERE ADDITIONAL TREATMENTS
- UNALTERABLE AGAINST INSECTS AND FUNGUS
- 100% RECYCLABLE COMPONENTS
- HIGH DURABILITY
- ANTISLIP SURFACE
- LOW MAINTENANCE
- EUROPEAN MANUFACTURING

Tarimatec Deck Hueca y Maciza (Hollow and Solid)

In the alveolar format, three finishes: Nature (natural brushed), Tecno (technical grooved) and Surco, all of them in more than 40 colours, with two widths of 150 and 180 millimeters for the Nature finish, thus deserving to be the largest range on the market. The Tarimatec system is completed with stainless steel clips and aluminum profiles of a special alloy in its structure; the best materials to guarantee long durability.

Deck



Solid Nature deck
Decking profile
149'5 x 20 x 2500mm



Tecno Hollow deck
Decking profile
150 x 27 x 2500mm



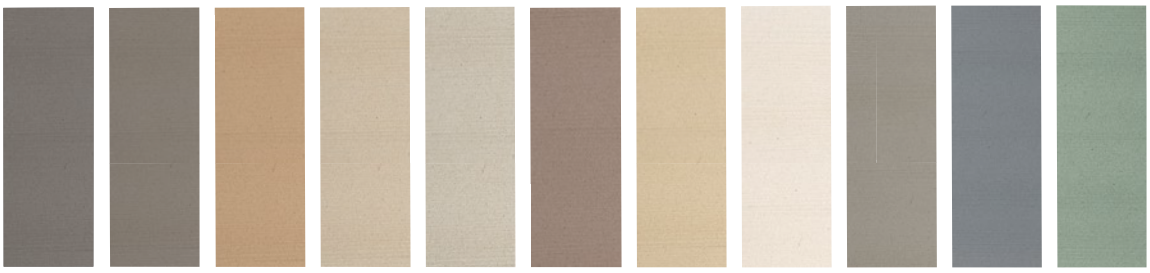
Nature Hollow deck
Decking profile
150 x 27 x 2500mm



Nature Hollow deck
Decking profile
180 x 27 x 2500mm

The CHROMATIC range is made up of 11 colors and this range is available in two finishes, Nature and Techno:

Nature



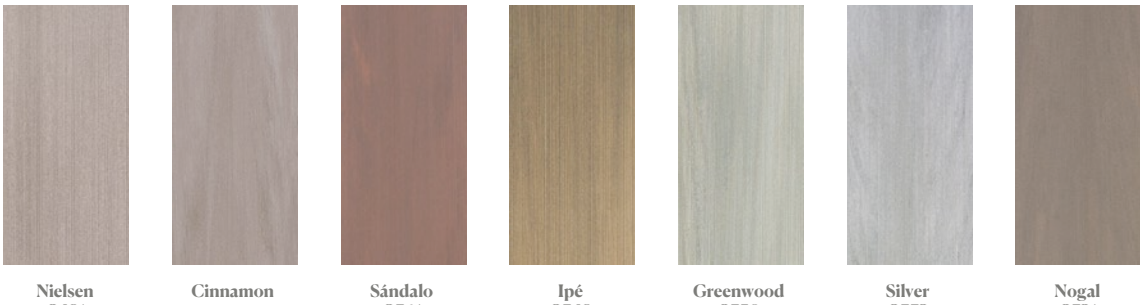
Antracita 2211 | Wengué 2204 | Miel 2215 | Moka 2241 | Cemento 2216 | Marrón 2212 | Arena 2215 | Blanco (RSI) 2217 | Gris 2214 | Cobalt 2488 | Moss 2487

Tecno



Antracita 2211 | Wengué 2204 | Miel 2215 | Moka 2241 | Cemento 2216 | Marrón 2212 | Arena 2215 | Blanco (RSI) 2217 | Gris 2214 | Cobalt 2488 | Moss 2487

As for the WOOD range, it is made up of 14 colors and this range is only available with the Nature surface finish.



Nielsen 2481 | Cinnamon 2365 | Sándalo 2361 | Ipé 2348 | Greenwood 2350 | Silver 2332 | Nogal 2321



Havanna 2482 | Cozumel 2377 | Luna 2364 | Polar 2347 | Roble 2349 | Castaño 2333 | Teka 2326

Lastly, the ETHNIC range has 6 colors on its chart, which are only available with the Surco finish.



Antique
2397



Iroko
2395



Bambú
2395

Lino
2398



Índigo
2490



Formentera
2489

The chart described above is available for Tarimatec Deck Hueca (hollow), both 150 mm and 180 mm wide. Tarimatec Deck Maciza (Solid), has all the colors previously shown in Nature finish available.

Available colours CHROMATIC TECNO • NATURE • NATURE MACIZA

Blanco	Cemento	Wengué	Arena	Gris	Marrón	Miel	Moka	Antracita	Moss	Cobalt
2217	2216	2204	2215	2214	2212	2213	2241	2211	2487	2488

Available colours MADERA NATURE • MADERA NATURE MACIZA

Nogal	Teka	Silver	Castaño	Greenwood	Roble	Ipe	Polar	Sándalo	Luna	Cinnamon	Cozumel	Nielsen	Habanna
2321	2326	2332	2333	2350	2349	2348	2347	2361	2364	2365	2377	2481	2482

Available colours ETHNIC • SURCO

Lino	Antique	Bamboo	Iroko	Formentera	Indigo
2398	2397	2396	2395	2489	2490



The physical properties of Tarimatec Deck are the following:

	TECNO / NATURE / SURCO VALUE	SOLID VALUE	TOLERANCE
Weight	2.625 g/m - 17 Kg/m² / 3.150 g/m - 20,4 Kg/m³*	3.700 g/m - 23,6 Kg/m²	± 100 g/m
Width	150 mm - 180 mm*	149,2 mm	± 0,5 mm
Height	27 mm	20 mm	± 0,5 mm
Length	2.500 mm		± 10 mm

PHYSICAL AND MECHANICAL PROPERTIES	TEST METHOD	TECNO/NATURE	SOLID
Coefficient of linear expansion	UNE 53126	2,81•10⁻-5	
Modulus of elasticity	UNE-EN ISO 178	4.660 Mpa	
Flexural strength	UNE-EN ISO 178	38,1 Mpa	46,4 Mpa
Deflection at maximum force	UNE-EN ISO 178	2,5 mm	5,1 mm
Resistance to indentation - Brinell hardness	UNE-EN 1534	179,95 HB (N/mm²)	
Water absorption (24 h. in water at 20oC ± 2oC)	UNE-EN 317	0,59%	0,38%
Water absorption (48 h. in water at 20oC ± 2oC)	UNE-EN 317	0,5%	0,39%
Water absorption (4 days in water at 20oC ± 2oC)	UNE-EN 317	0,59%	0,43%
Water absorption (7 days in water at 20oC ± 2oC)	UNE-EN 317	1,09%	0,67%
Water absorption (14 days in water at 20oC ± 2oC)	UNE-EN 317	1,08%	0,71%
Water absorption (28 days in water at 20oC ± 2oC)	UNE-EN 317	1,663%	0,95%
Moisture resistance under cyclic conditions- Flex. Resist. Variation (%)	UNE-EN 321	-2,7%	-1,34%
Moisture resistance - 5 hour boiling test - Mass Variation (%)	UNE-EN 15534-1	1,73%	1,28%
Resistance to salt spray - ΔE Variation	UNE-EN ISO 9227	1,25 ΔE	1,25 ΔE
Heat reversion	UNE-EN 479	0,236%	0,215%
SRI (LEED Colours)	ASTM E1980-11	> 80	
Vicat Temperature	UNE-EN ISO 306	87,4°C	
Density	UNE-EN ISO 1183-1	1,54 g/cm3	1,44 g/cm3
Impact resistance	UNE-EN ISO 477	>7J	>20J
Slip resistance	UNE-ENV 12633	Class 3	
Heat deflection temperature	ISO 75-2 :2005	82,7±0,7°C	84,7±0,9°C
Thermodynamic properties by DMA of sample	ASTM E1640	Tg=93,19°C	
Reaction to fire classification	UNE-EN 13501-1 :2007	Bfl s1	
Fire classification of construction products and building elements UNE EN UNE-ENV 1187:2003 13.501 – 5:07/AC09	UNE-ENV 1187:2003 ENSAYO 1	Broof (t1)	
Resistance to basidiomycete fungi	UNE-ENV 12038	Non attackable	
Resistance to soft rot fungi	CEN/TS 15083-2	Non attackable	

Tarimatec Vertical Mont Blanc

Within the vertical range, there is the Mont Blanc profile, whose main characteristic is that its visible face is exactly the same as Tarimatec Deck Nature, but its reduced section makes it a much lighter profile because it is going to be a lining of walls and ceilings. The measurements of this profile are 150 mm wide, by 15 mm thick.

Tarimatec Vertical Mont blanc, is a ventilated facade system, tested at all critical points to be suitable for this use, with an excellent fire rating, hard body and soft body impact resistance, as well as unbeatable pressure resistance. and wind suction, reaching the maximum test capacity of the equipment without appreciable damage, with simulation of winds of more than 320 km/hour.

The technical data of the profile and the system are as follows:

	VALUE	TOLERANCE
Weight	1.600 g/mL	± 65 g/m
Width	150 mm	± 0,5 mm
Height	15 mm	± 0,5 mm
Length	3.000 mm	± 10 mm

PHYSICAL AND MECHANICAL PROPERTIES	TEST METHOD	VALUE
Coefficient of linear expansion	UNE 53126	2,84•10--5
Elasticity Modulus	UNE-EN ISO 178	4.675 Mpa
Flexural strength	UNE-EN ISO 178	29,4 Mpa
Deflection at maximum force	UNE-EN ISO 178	2,9 mm
Shore hardness	UNE-EN ISO 868	65
Water absorption (24 h. in water at 23 oC)	UNE-EN ISO 62	0,99%
Water absorption (7 days in water at 23 oC)	UNE-EN ISO 62	3,78%
Vicat temperature	UNE-EN ISO 306	87,4%
Density	UNE-EN ISO 1183-1	1,54 g/cm3
Impact resistance	UNE-EN ISO 477	>5J
Heat deflection temperature	ISO 75-2 :2005	80,3±0,7°C
Reaction to fire classification	UNE-EN 13501-1 :2007	B-s3, d0
Wind load	ETAG 034	>5000 P

Available colours VERTICAL MONT BLANC

Blanco	Cemento	Wengué	Arena	Gris	Marrón	Miel	Moka	Antracita
2217	2216	2204	2215	2214	2212	2213	2241	2211

Nogal	Teka	Silver	Castaño	Greenwood	Roble
2321	2326	2332	2333	2350	2349

Ipe	Polar	Sándalo	Luna	Cinnamon	Nielsen	Habanna
2348	2347	2361	2364	2365	2481	2482

** See the appearance of the colors referenced in the Tarimatec Deck section.*

Tarimatec Vertical Annapurna

It is the range of decorative profiles from Tarimatec, providing solutions to the needs of the most daring projects. With its multiple formats, it has a place in practically any project that wants to provide that touch of distinction, be it lattices, wall and wall cladding, ceilings, and even furniture (Blocks) and fences (Paloalto and Centinela).

The available formats are 40x40 mm, 80x40 mm, 160x40 mm, with a "Sanding" surface finish, and the 50x30 mm format with a "Nature" finish. Regarding the physical properties of each of the profiles, they are the following:

Annapurna 40x40 mm

	VALUE	TOLERANCE
Weight	880 g/mL	± 50 g/m
Width	40 mm	± 0,5 mm
Height	40 mm	± 0,5 mm
Thickness	4 mm	± 0,2 mm
Length	3.000 mm	± 10 mm

Annapurna 80x40 mm

	VALUE	TOLERANCE
Weight	1.600 g/mL	± 50 g/m
Width	80 mm	± 0,5 mm
Height	40 mm	± 0,5 mm
Thickness	4 mm	± 0,2 mm
Length	3.000 mm	± 10 mm

Annapurna 160x40 mm

	VALUE	TOLERANCE
Weight	3.220 g/mL	± 50 g/m
Width	160 mm	± 0,5 mm
Height	40 mm	± 0,5 mm
Thickness	4 mm	± 0,2 mm
Length	3.000 mm	± 10 mm

As far as the different properties characterized by the relevant tests are concerned, they are the following:

PHYSICAL AND MECHANICAL PROPERTIES	TEST METHOD	VALUE
Coefficient of linear expansion	UNE 53126	2,84•10^{-}-5
Elasticity modulus	UNE-EN ISO 178	4.675 Mpa
Flexural strength	UNE-EN ISO 178	29,4 Mpa
Deflection at maximum force	UNE-EN ISO 178	2,9 mm
Brinelll hardness	UNE-EN 1534	179,95 HB (N/mm^2)
Water absorption (24 h. in water at 20 oC ± 2oC)	UNE-EN 317	0,99%
Water absorption (28 days in water at 20 oC ± 2oC)	UNE-EN 317	1,78%
Vicat temperature	UNE-EN ISO 306	87,4%
Density	UNE-EN ISO 1183-1	1,54 g/cm3
Impact resistance	UNE-EN ISO 477	>5J
Heat deflection temperature	ISO 75-2 :2005	80,3±0,7°C
Resistance to salt spray ΔE variation	UNE-EN ISO 9227	1,25 ΔE
Resistance to basidiomycete fungi	UNE-ENV 12038	Non attackable
Resistance to soft rot fungi	CEN/TS 15083-2	Non attackable
Reaction to fire classification	UNE-EN 13501-1 :2007	B-s3, d0

Regarding the colors, they are the following:

Blanco	Cemento	Wengué	Arena	Gris	Marrón	Miel	Moka	Antracita	Moss	Cobalt
2217	2216	2204	2215	2214	2212	2213	2241	2211	2487	2488

Nogal	Teka	Silver	Castaño	Greenwood	Roble	Ipe
2321	2326	2332	2333	2350	2349	2348

Polar	Sándalo	Luna	Cinnamon	Cozumel	Nielsen	Habanna
2347	2361	2364	2365	2377	2481	2482

Tarimatec Vertical Aris

Our decorative panels come in different sizes and finishes, ideal for changing the look of your kitchen, living room or bathroom. Their WPC composition makes them completely waterproof and fireproof, which gives the product unbeatable technical qualities, greater than MDF panels. Ease, speed of installation and simplicity of maintenance and cleaning are factors that define the Vertical ARIS, making reforms and projects cheaper than those carried out with other types of material and offering the maximum guarantee of insulation and resistance.

Proportionality and regularity with all the elegance. This is our Aris Square, a versatile decorative panel, with a design that will cover your surfaces, giving a touch of sophistication to any room.

Aris Cadence was born with the idea of transmitting dynamism and positivity. With an asymmetrical and uneven drawing he generates a set of design and avant-garde that leaves no one indifferent. We are facing a clear commitment to differentiated and unique spaces.

Aris is available in two surface finishes, “Nature” and “Trama”. The "Nature" finish is suitable for both interior and exterior, and "Trama" finish, suitable only for interior spaces. Regarding the physical characteristics of the Aris panels, they are the following:

	ARIS / ARIS CADENCE VALUE	TOLERANCE
Weight	1.961 g/m - 10,06 Kg/m^2 / 2.205 g/m - 11,31 Kg/m^2	± 100 g/m
Width	217,5 mm	± 0,5 mm
Height	15 mm	± 0,5 mm
Length	3.000 mm	± 10 mm

PHYSICAL AND MECHANICAL PROPERTIES	TEST METHOD	NATURE / TRAMA
Coefficient of linear expansion	UNE 53126	2,81•10^{-}-5
Elasticity modulus	UNE-EN ISO 178	4.660 Mpa
Resistance to indentation - Brinell hardness	UNE-EN 1534	179,95 HB (N/mm^2)
Resistance to indentation - Brinell hardness	UNE-EN 317	1,663%
Moisture resistance under cyclic conditions- Flex. Resist. Variation (%)	UNE-EN 321	-2,7%
Moisture resistance - 5 hour boiling test - Mass variation (%)	UNE-EN 15534-1	1,73%
Resistance to salt spray - ΔE Variation	UNE-EN ISO 9227	1,25 ΔE
Determination of thermal shrinkage	UNE-EN 479	0,236%
Vicat temperature	UNE-EN ISO 306	87,4°C
Density	UNE-EN ISO 1183-1	1,54 g/cm3
Impact resistance	UNE-EN ISO 477	>10J
Thermodynamic properties by DMA of sample - natural loads.	ASTM E1640	Tg=93,19°C
Reaction to fire classification	UNE-EN 13501-1 :2007	Bs3d0
Resistance to basidiomycete fungi	UNE-ENV 12038	Non attackable
Resistance to soft rot fungi	CEN/TS 15083-2	Non attackable

Tarimatec Perfil de terminacion (End – Profile)

The Tarimatec finishing profile has a place in all systems, and provides a harmonious solution on the perimeters of the installations where it is required. Special screws with the head lacquered in the color of the finishing profile are used for their fixing so that they go practically unnoticed.

The dimensions of this profile are 180x10 mm, and a standard length of 3 m, the only surface finish for this profile is "Nature", and the colors available are the same as those available in Tarimatec Deck.

The technical characteristics of this profile are the following:

Código CPC: 36
" Rubber and plastic products ".

	VALUE	TOLERANCE
Weight	2.600 g/mL	± 100 g/m
Width	180 mm	± 5 mm
Height	10 mm	± 0,5 mm
Length	3.000 mm	± 10 mm

PHYSICAL AND MECHANICAL PROPERTIES	TEST METHOD	NATURE / TRAMA
Coefficient of linear expansion	UNE 53126	2,81•10⁻-5
Elasticity modulus	UNE-EN ISO 178	4.660 Mpa
Resistance to indentation - Brinell hardness	UNE-EN 1534	179,95 HB (N/mm²)
Water absorption (28 days in water at 20oC ± 2oC)	UNE-EN 317	1,663%
Moisture resistance under cyclic conditions- Flex. Resist. Variation (%)	UNE-EN 321	-2,7%
Moisture resistance - 5 hour boiling test - Mass variation (%)	UNE-EN 15534-1	1,73%
Resistance to salt spray - ΔE Variation	UNE-EN ISO 9227	1,25 ΔE
Heat reversion	UNE-EN 479	0,236%
Vicat temperature	UNE-EN ISO 306	87,4°C
Density	UNE-EN ISO 1183-1	1,54 g/cm3
Impact resistance	UNE-EN ISO 477	>10J
Thermodynamic properties by DMA of sample - natural loads.	ASTM E1640	Tg=93,19°C
Reaction to fire classification	UNE-EN 13501-1 :2007	Bs3d0
Resistance to basidiomycete fungi	UNE-ENV 12038	Non attackable
Resistance to soft rot fungi	CEN/TS 15083-2	Non attackable

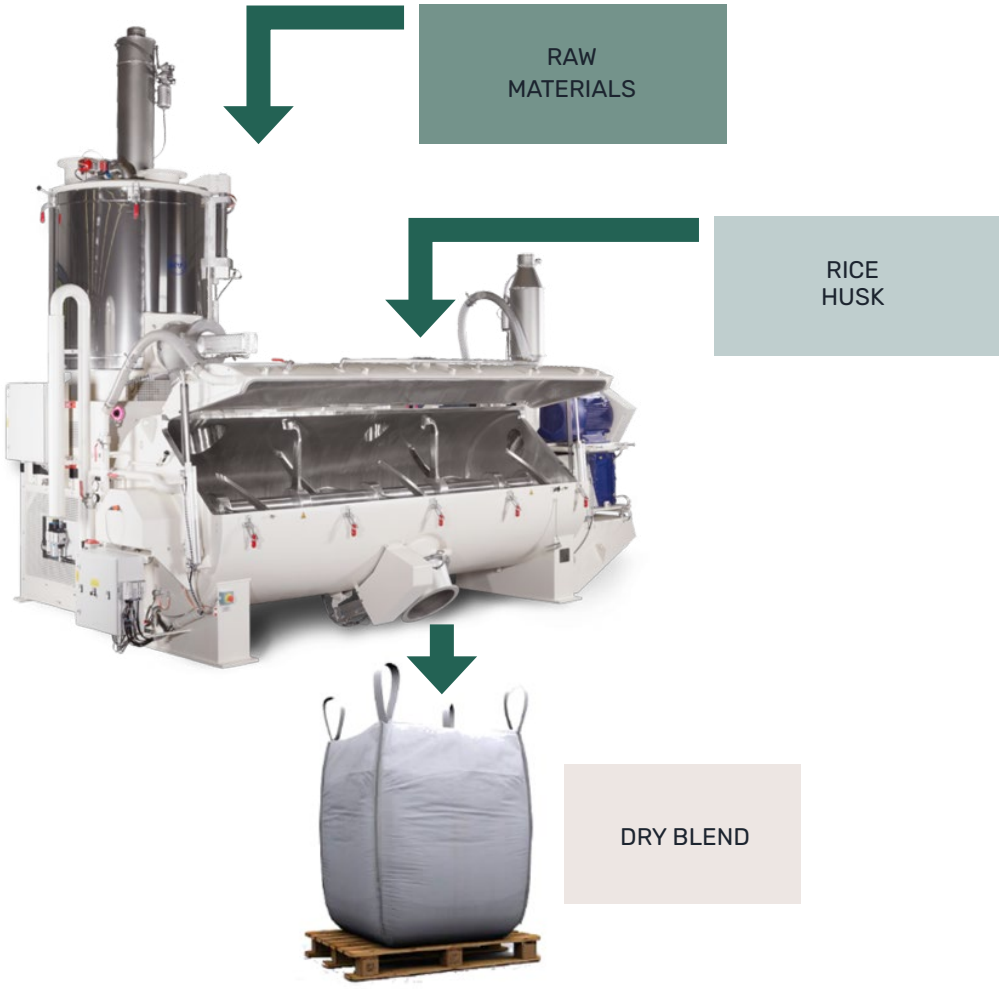
Productive process

The manufacture of the range of Tarimatec products is carried out in 3 stages:

Mixed	Extrusion	Expedition

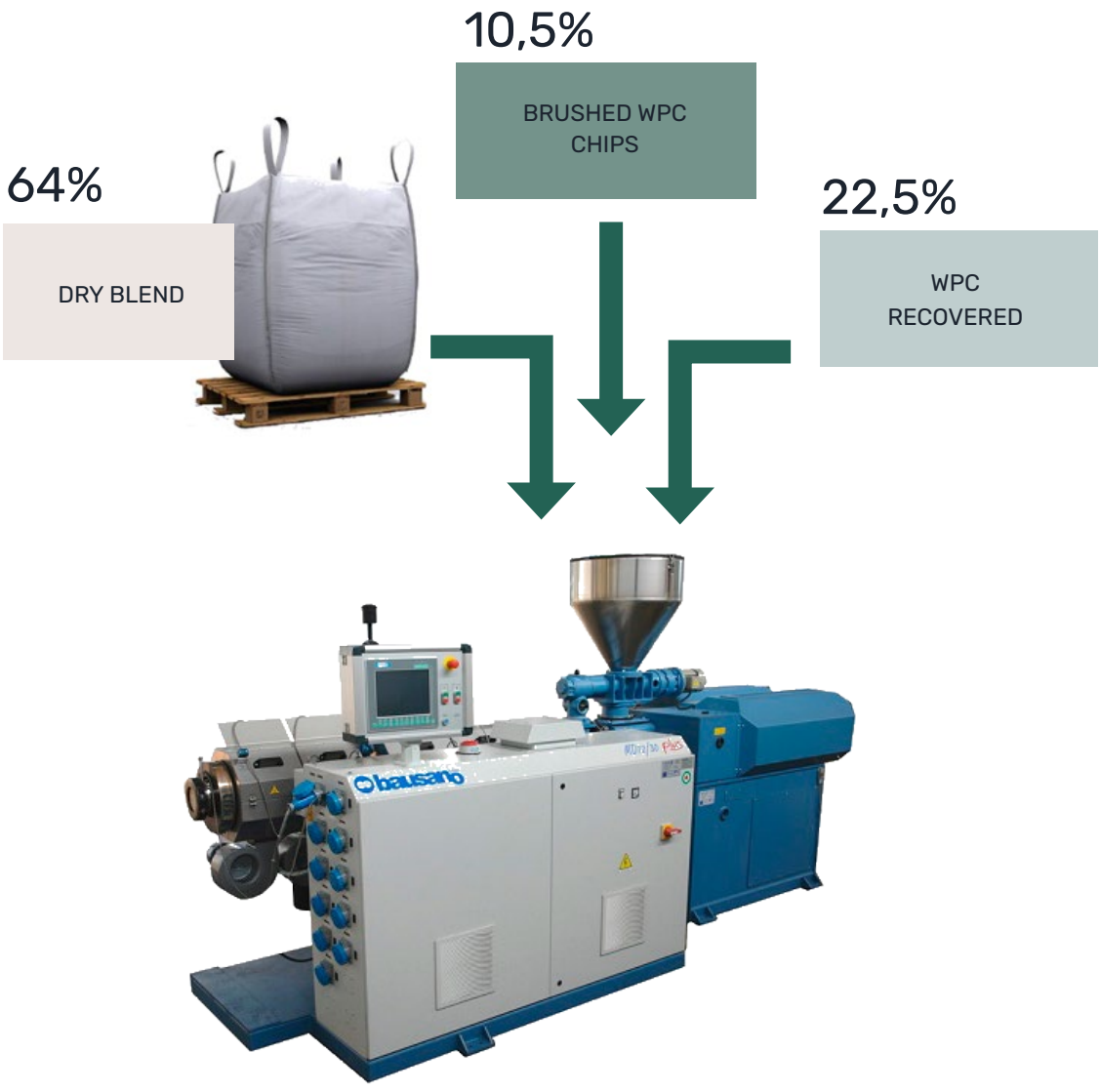
Stage 1. MIXED

In the mixing stage, the different raw materials of which the Tarimatec profiles are made are introduced into a turbo-mixer. The turbo-mixer is made up of two pieces of equipment, a high-revolution vertical mixer, which mixes all the components introduced up to a certain temperature, which, when reached, lowers the mixture to a low-revolution horizontal mixer, in which the vegetable fiber together with the mixed materials, thus obtaining the dry-blend prepared to introduce it in the extrusion stage.



Stage 2. EXTRUSION

In the extrusion stage, the dry blend obtained in stage 1 is introduced into the extruder. It will be used as raw material in the extrusion process of the different profiles, but only 64%, since the rest will be provided from the chips obtained. of the brushing/sanding process of the different profiles (10.5%), as well as of WPC recovered from remains of profiles from installations, non-compliant material and production losses (22.5%).



Stage 3. EXPEDITION

The manufactured profiles are packed and palletized as appropriate, and are ready to serve, adding the corresponding accessories in the dispatch area until the order is completed.



LCA information

Functional unit: 1 kg of TARIMATEC flooring installed, with an estimated useful life of 50 years.

For information purposes, the conversion factor to mass per square meter is provided for each pallet model:

- 17.06 kg/m2 TARIMATEC Deck Hueca.
- 23.86 kg/m2 TARIMATEC Deck Maciza.
- 10.32 kg/m2 TARIMATEC Vertical Mont Blanc.
- 12.96 kg/m2 TARIMATEC Vertical Annapurna.
- 10.14 kg/m2 TARIMATEC Vertical Aris.
- 14.40 kg/m2 TARIMATEC Perfil de terminación.

Reference service life: The useful life of the product is considered to be the same as that of the building because it is a product that is incorporated into the building's facilities, that is, 50 years.

Time representativeness: 2020.

Database(s) and LCA software used: SimaPro v9.3 and Ecoinvent v3.8 have been used. The calculation methodologies are in accordance with the UNE-EN 15804:2012+A2:2020 standard.

Description of system boundaries: From “cradle to the grave and module D” (A,B,C,D). The EPD covers modules A1-A3, A4-A5, B1-B7, C1-C4 and D.

The principles of modularity and "polluter payer principles" have been followed. The following processes have been excluded:

- Manufacture of equipment used in production, buildings or any other capital goods;
- Transportation of personnel to the plant;
- Transportation of personnel within the plant;
- Research and development activities.
- Long-term emissions.

95% of all the inputs and outputs of mass and energy of the central system, identified in the life cycle inventory included in this report, have been included. Those inputs and outputs, for which data are not available, which together represent less than 5% of the mass, such as packaging waste from auxiliary materials, have not been considered.

Assignment has been avoided whenever possible. In the necessary cases (energy, waste generation) an allocation by mass has been used, according to the weight in kg of the product. The consumption of the specific process has been measured with specific meters.

All primary data has been obtained from Plásticos Viters. Secondary data has been obtained from the Ecoinvent 3.8 database.

The included scenarios are currently in use and are representative of one of the most likely alternatives.

Raw material supply (A1)

Extraction and processing of natural resources and manufacture of raw materials: PVC resin, rice hulls, calcite, residues and additives.

This stage includes the production of the energy consumed in the manufacturing stage (A3).

Transport to the manufacturer (A2)

Transport of all the raw materials considered in module A1, from the place of extraction, production and treatment to the factory gate.

Manufacturing (A3)

This module considers all the pallet manufacturing processes, including the consumption of packaging materials, as well as the treatment of the waste generated.

The product is distributed packed with 100% recycled strapping, plastic film and pallets.

The primary data used has been obtained from the production plant itself and is representative of the production of TARIMATEC pallets from Plásticos Viters.

Distribution (A4) The included scenarios are currently in use and are representative of one of the most likely alternatives. An additional declaration of representative mixtures for the corresponding region is allowed. Transportation of the product, from the production plant to the place of installation.

PARAMETER	VALUE (expressed per Functional unit)	
Fuel type and consumption vehicle or vehicle type used for transport	National distribution: Truck of 16-32 tn Euro 4 and a diesel consumption of 0.38 liters per km.	International distribution: Truck of 16-32 tn Euro 4 and a diesel consumption of 0.38 liters per km and Transoceanic Ship
Distance	Average distribution (International and national):	Average distribution (International and national): 3,241.17 km (by boat)
Capacity utilisation (including empty returns)	% assumed in Ecoinvent	
Bulk density of transported products: Decks	14,79 kg/m2	
Volume capacity utilisation factor	1	

Installation (A5) This module includes the consumption of auxiliary materials (in addition to the product), as well as the management of possible waste generated during this information module.

PARAMETER	VALUE (expressed per Functional unit)	
Secondary materials for installation: Installation kit (kg)	Self-drilling screw Clips Start clip Squad Batten Angle Reinforcement tube	1.24E-03 1.46E-02 6.25E-04 3.19E-04 7.60E-02 2.68E-04 2.12E-04
Other resources consumption	None	
Quantitative description of energy type (regional use) and consumption during the installation process	Electricity 9.55E-03 kWh kWh	
Waste of materials at the work site, before processing waste, generated during the installation of the product (Packaging and installation losses)	Packaging: Strap 8.10E-04 kg Film 1.25E-03kg Cardboard box 4.12E-03kg Pale 2.54E-03kg Product loss: 0%	
Direct emissions to ambient air, soil and water	It is considered despicable	

B. Stage of use

As it is a passive product within a construction, the stage of use (including modules B1 to B7) is considered negligible.

Demolition (C1)

It is considered a joint demolition of the building, so the contribution of the concrete demolition of the evaluated platforms is not considered relevant.

Transportation (C2)

Once the product (platforms and auxiliary installation material) has been uninstalled, it is transported 50 km in 7.5-16 ton trucks from the site to the landfill.

Waste treatment for reuse, recovery or recycling (C3)

Waste from the system is considered to be unprocessed prior to disposal.

Final Disposal (C4)

All the waste from the system (product and auxiliary material) is deposited in a landfill.

PARAMETER	**VALUE** (expressed per Functional unit)
Collection process specified by type	30% to landfill, collected and mixed with the rest of the construction waste construction waste *
Recovery system specified by type	70% recycling
Disposal specified by type	30% landfill
Assumptions for scenario development	Product demolition waste is transported 50 km by means of 7.5-16 tn Euro 5 trucks, to the place of final treatment or deposit.

Benefits of recycling (module D)

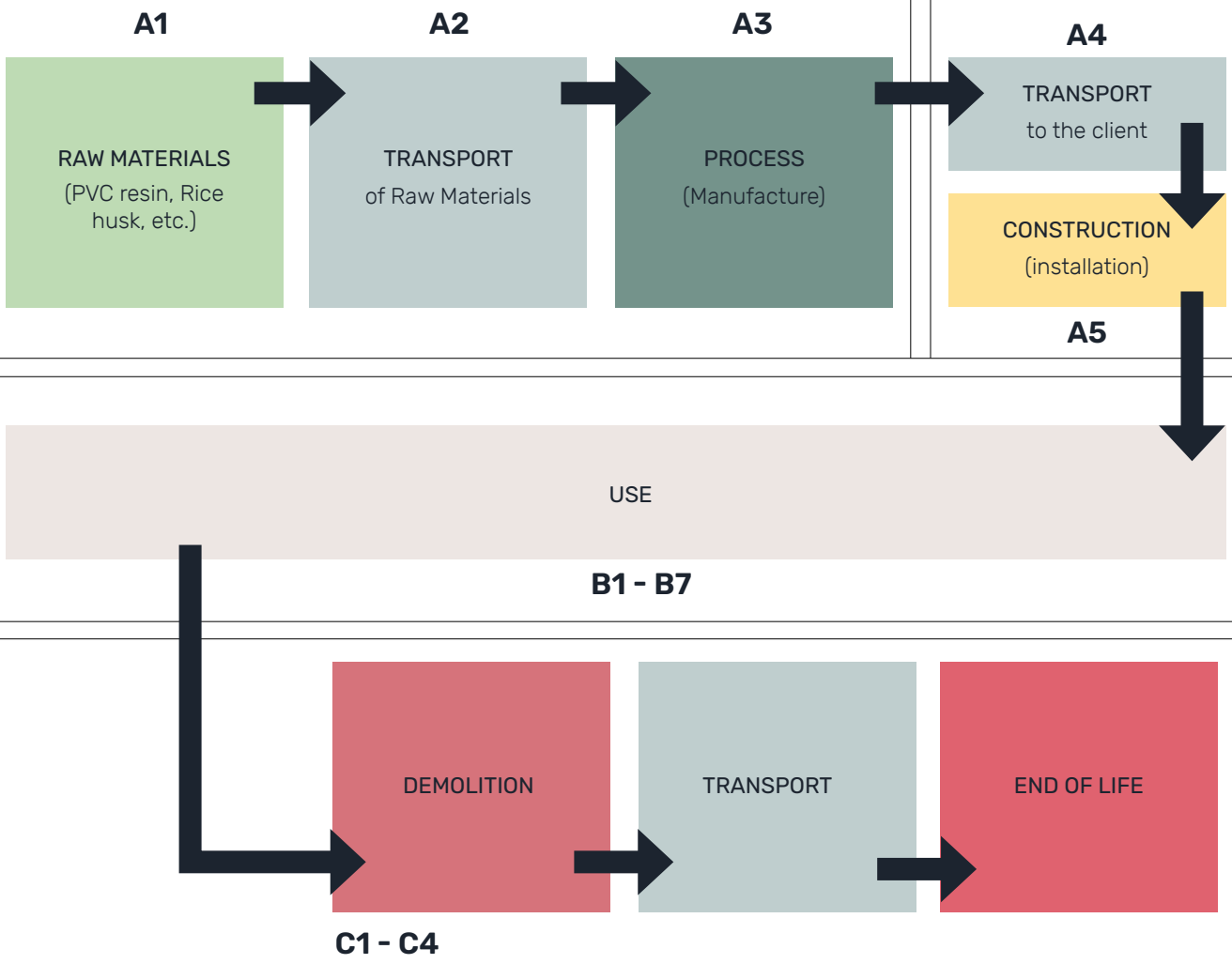
Module D has been considered, presenting recycling benefits for 70% of the product, while the remaining 30% is disposed of in landfill as a mixture of construction product.

**The treatment of waste published in Eurostat has been taken as a reference https://www.eea.europa.eu/publications/construction-and-demolition-waste-challenges/construction-and-demolition-waste-challenges*





SYSTEM DIAGRAM



More information:

- The life cycle analysis study has been carried out by PLASTICOS VITERS with the technical support of ISOLANA AHORRO ENERGETICO SL.
- The study covers a minimum of 95% of the materials and energy for each module. evaluated, and at least 99% of the total use of materials and energy for each unit process.
- More product information: www.tarimatec.com
- The quality of the input data has been evaluated according to its technological, temporal and geographical coverage. It is considered that the representativeness of the selected processes is good, resulting in a value of 3.62 out of 5.

Modules declared, geographical scope, specific data and data variation

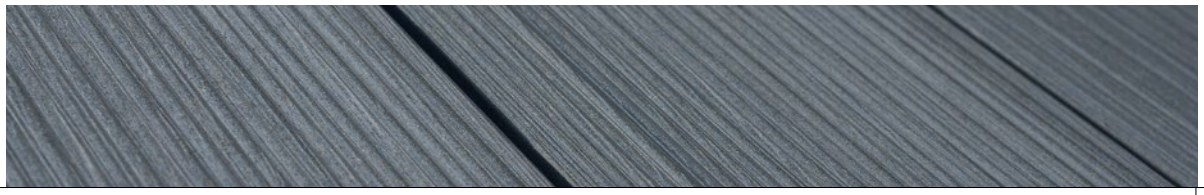
	Product stage			Construction process stage		Use stage							End of life stage				Resource recovery stage
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
Modulo	**A1**	**A2**	**A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Modules declared	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Geography	ES	ES	ES	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO
Specific data used	>90% GWP-GHG					-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	Variation of declared impact products < Not relevant					-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	NA					-	-	-	-	-	-	-	-	-	-	-	

Content information

Tarimatec

Product components	Weight Kg	Post-consumer material, weight-%	Renewable material, weight-%
PVC resin	0,30 – 0,40	-	-
Stabilizer	0,01 – 0,02	-	-
Lub. Internal	0,003 – 0,004	-	-
Lub. External	0,01 – 0,02	-	-
Lub. High rank	0,003 – 0,006	-	-
Process improver	0,005 – 0,007	-	-
Ref. Mineral and co-stabilizer	0,010 – 0,015	70 %	-
Rice husk	0,15 – 0,18	100 %	-
Calcite	0,12 – 0,15	-	-
Colors	0,02 – 0,03	-	-
Brushed residue	0,04 – 0,06	-	-
Reclaimed (Recycled Fab Res. Facility)	0,20 – 0,28	100 %	-
TOTAL WEIGHT	1,000	-	-
Packaging materials	**Weight, kg**	**Weight (% with respect to the product)**	
Strip	8,10E-04	0,08 %	
Shrink-wrapped polyethylene film packaging	1,25E-03	0,13 %	
Cardboard box packaging	4,12E-03	0,41 %	
Pallet	2,54E-03	0,25 %	

No substance in the product greater than 0.10% by weight is present on the "List of Potentially Hazardous Substances" (SVHC) candidates for authorization by the REACH legislation.



Environmental Information

TARIMATEC
Potential environmental impact - additional mandatory and voluntary indicators

The estimated impact results are only relative statements which do not indicate the end points of the impact categories, exceeding threshold values, safety margins or risks. Life cycle impact assessment methods defined in UNE-EN 15804:2012+A2:2020 and in the PCR have been applied. These methods are implemented in SimaPro as "UNE-EN 15804+A2 Method". As indicated by the PCR, the Eutrophication aquatic freshwater is given in both kg P04 eq. and Kg P eq. Potential environmental impact – mandatory indicators according to UNE-EN 15804.

Indicator	Unit	Results per Functional unit														
		Manufacture	Construction		Use							End of life				Module
		A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Global warming fossil fuels (GWP- fossil)	kg CO_2 eq	1,03E+00	7,59E-02	7,53E-01	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	7,55E-03	9,21E-04	2,07E-03	-3,09E-03
Global warming - biogenic (GWP-biogenic)	kg CO_2 eq	-4,27E-02	2,34E-05	4,00E-03	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	2,48E-06	5,83E-06	3,14E-05	-3,74E-05
Gobal warming land use and land use change (GWP-luluc)	kg CO_2 eq	1,66E-03	8,62E-07	1,32E-02	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	6,11E-08	7,55E-06	7,51E-07	-9,49E-06
Global warming total (GWP-total)	kg CO_2 eq	9,90E-01	7,60E-02	7,70E-01	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	7,56E-03	9,34E-04	2,10E-03	-3,14E-03
Ozone layer depletion (ODP)	kg CFC11 eq	3,09E-07	1,76E-08	5,86E-08	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	1,79E-09	5,61E-11	3,68E-10	-4,25E-10
Acidification (AP)	mol H+ eq	5,94E-03	1,08E-03	5,52E-03	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	2,62E-05	7,83E-06	1,93E-05	-2,79E-05
Eutrophication - freshwater (EP-freshwater)	kg P eq	3,03E-05	4,13E-08	3,12E-05	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	3,86E-09	3,97E-08	2,49E-08	-7,03E-08
Eutrophication - freshwater (EP-freshwater)	kg P04- eq	9,30E-05	1,27E-07	9,57E-05	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	1,19E-08	1,22E-07	7,65E-08	-2,16E-07
Eutrophication - marine (EP-marine)	kg N eq	9,92E-04	2,57E-04	6,81E-04	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	8,40E-06	1,13E-06	8,00E-06	-9,12E-06
Eutrophication - terrestrial (EP-terrestrial)	mol N eq	1,15E-02	2,86E-03	7,56E-03	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	9,24E-05	1,26E-05	8,76E-05	-1,00E-04
Trophospheric Ozone Formation (POCP)	kg NMVOC eq	3,39E-03	7,45E-04	2,52E-03	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	2,52E-05	3,37E-06	2,42E-05	-2,76E-05
Abiotic depletion for non-fossil resources (ADP-minerals&metals)	MJ	7,28E-06	2,46E-09	2,05E-06	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	3,28E-10	3,65E-11	9,43E-11	-1,34E-10
Abiotic depletion for fossil resources (ADP-fossil)	kg Sb eq	1,88E+01	1,07E+00	1,04E+01	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	1,07E-01	2,19E-02	2,76E-02	-5,23E-02
Water user deprivation (WDP)	m^3 depriv.	7,40E-01	-1,83E-04	4,79E+00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	-1,79E-05	6,14E-04	6,89E-05	-7,80E-04
Global Warming Potential - GHG	kg CO_2 eq	1,00E+00	7,55E-02	7,44E-01	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	7,50E-03	0,00	2,05E-03	-3,06E-03

** Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are higher or as there is limited experience with the indicator.*

Use of resources

Indicator	Unit	Results per Functional unit														
		Manufacture	Construction		Use							End of life				Module
		A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Use of renewable primary energy, excluding the resources of non-renewable primary energy used as a raw materials	MJ	2,51E+00	1,56E-03	3,34E+00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	1,64E-04	0,00	6,51E-04	-6,41E-03
Use of renewable primary energy used as raw materials	MJ	1,16E-01	0,00E+00	1,16E-01	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00E+00	0,00	0,00E+00	0,00E+00
Total use a renewable primary energy (primary energy and resources of renewable primary energy used as raw materials)	MJ	2,62E+00	1,56E-03	3,45E+00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	1,64E-04	0,00	6,51E-04	-6,41E-03
Use of non-renewable primary energy, excluding the resources of non-renewable primary energy used as a raw materials	MJ	2,01E+01	1,13E+00	1,11E+01	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	1,14E-01	0,00	2,93E-02	-5,49E-02
Use of non-renewable primary energy used as raw materials	MJ	8,85E-02	0,00E+00	8,85E-02	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00E+00	0,00	0,00E+00	0,00E+00
Total use of non-renewable primary energy (primary energy and resources of renewable primary energy used as raw materials)	MJ	2,02E+01	1,13E+00	1,12E+01	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	1,14E-01	0,00	2,93E-02	-5,49E-02
Use of secondary materials	kg	1,74E-01	0,00E+00	0,00E+00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00E+00	0,00	0,00E+00	0,00E+00
Use of renewable secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00E+00	0,00	0,00E+00	0,00E+00
Use of non-renewable secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00E+00	0,00	0,00E+00	0,00E+00
Net use of fresh water	m^3	1,60E-02	3,34E-06	1,26E-01	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	2,94E-07	0,00	3,31E-06	-1,35E-05

Waste production and output flows

Waste production

Indicator	Unit	Results per Functional unit														
		Manufacture	Construction		Use							End of life				Module
		A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste disposed	kg	2,21E-05	2,06E-06	5,91E-06	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	2,81E-07	0,00	5,90E-08	-6,44E-08
Non-hazardous waste disposed	kg	1,60E-01	4,62E-05	1,92E-01	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	4,41E-06	0,00	3,93E-01	-3,84E-01
Radioactive waste disposed	MJ	4,26E-05	7,65E-06	3,93E-05	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	7,65E-07	0,00	1,74E-07	-3,69E-07

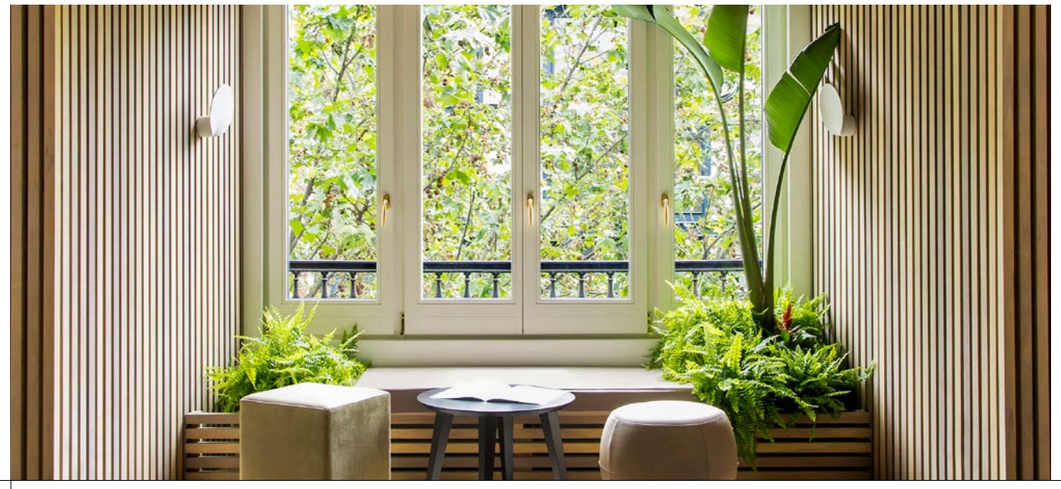
Output flows

Indicator	Unit	Results per Functional unit														
		Manufacture	Construction		Use							End of life				Module
		A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Components for re-use	kg	0,00E+00	0,00E+00	0,00E+00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00E+00	0,00	0,00E+00	0,00
Materials for recycling	kg	0,00E+00	0,00E+00	0,00E+00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00E+00	7,00E-01	0,00E+00	0,00
Materials for energy recovery	kg	0,00E+00	0,00E+00	0,00E+00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00E+00	0,00	0,00E+00	0,00
Exported energy	MJ	0,00E+00	0,00E+00	0,00E+00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00E+00	0,00	0,00E+00	0,00

Information on biogenic carbon content

Results per Functional unit		
BIOGENIC CARBON CONTENT	**Unit**	**QUANTITY**
Biogenic carbon content in product	kg C	3,19E-01
Biogenic carbon content in packaging	kg C	1,20E-01

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO_2.





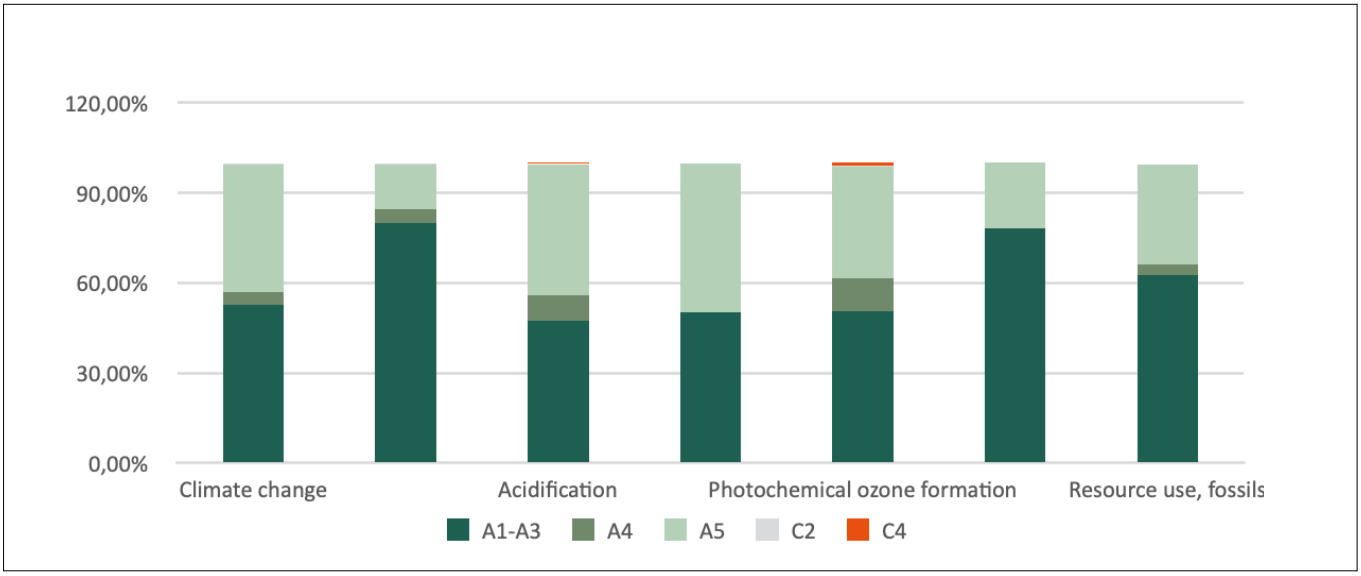
LCA Interpretation

As can be seen in the graph, the product stages (A1-A3) and the installation stage (A5) are the Life Cycle Stages that have the greatest impacts for all the categories analyzed. The product stage (A1-A3) represents between 47% (Eutrophication) and 80% (Depletion of the ozone layer) of the total impact of the product life cycle.

The distribution (A4) represents an intermediate-low impact for all impact categories analyzed between 0.03% (Use of resources, minerals and metals) and 11% (Formation of photochemical ozone) of the total impact of the life cycle .

On the other hand, the installation stage (A5) represents between 15% (Reduction of the ozone layer) to 50% (Eutrophication, fresh water) of the total life cycle.

In relation to the End of Life stages (C2), the impact of all categories is less than 1%, as in the case of C4.



Additional information

The electrical mix used corresponds based on the mix provided by the marketer, specifically for Plásticos Viters for the year 2020.

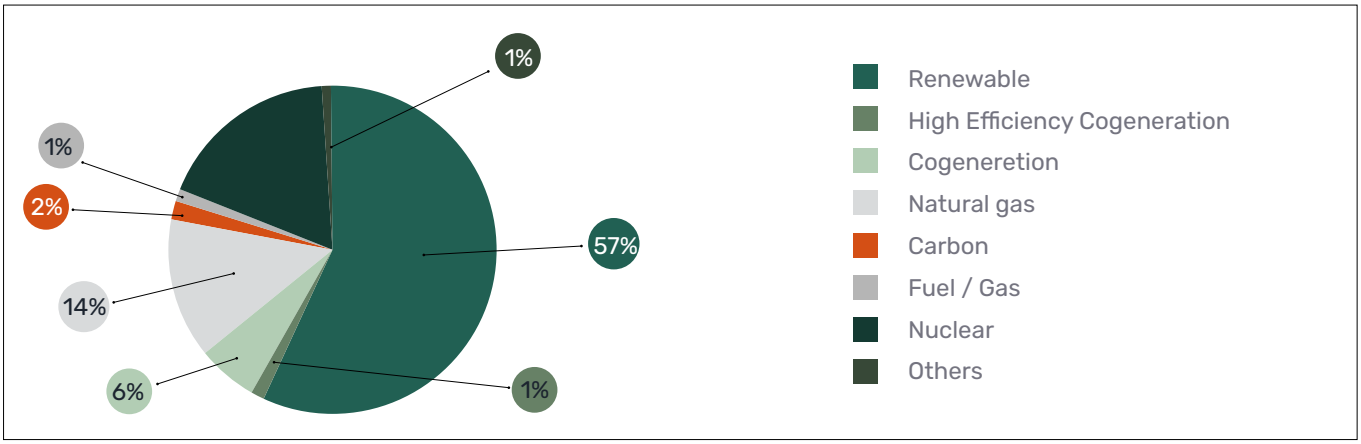


Figure 1 - Electric mix EDP Customers SAU (2020).

Information related to Sector EPD

This is not a Sector EPD®.

Differences versus previous versions

First version of EPD®.

References

General Programme Instructions of the International EPD® System. Version 3.01.

PCR 2019:14. Construction products (EN 15804:A2). Version 1.11

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.

UNE-EN 15804:2012+A2:2020 Sustainability of construction works - Environmental product.

Declarations - Basic rules for the Construction product category.

LCA Plásticos Viters - Tarimatec, March 2022.

VERIFICATION STATEMENT CERTIFICATE

CERTIFICADO DE DECLARACIÓN DE VERIFICACIÓN

Certificate No. / Certificado nº: EPD07701

TECNALIA R&I CERTIFICACION S.L., confirms that independent third-party verification has been conducted of the Environmental Product Declaration (EPD) on behalf of:
TECNALIA *R&I CERTIFICACION S.L., confirma que se ha realizado verificación de tercera parte independiente de la Declaración Ambiental de Producto (DAP) en nombre de:*

PLASTICOS VITERS, S.A.
C/ Oller, 30 Parque empresarial
46980 PATERNA (Valencia) - SPAIN

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

TARIMATEC Deck Hueca, Deck Maciza, Vertical Mont Blanc, Vertical Annapurna, Vertical Aris and Perfil de terminación.
TARIMATEC Deck Hueca, Deck Maciza, Vertical Mont Blanc, Vertical Annapurna, Vertical Aris y Perfil de terminación.

with registration number **S-P-07588** in the International EPD® System *(www.environdec.com).*
*con número de registro **S-P-07588** 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.3.01**
- **PCR 2019:14 Construction products (EN 15804:A2) v.1.11**
- **CPC 36 Rubber and plastic products.**

Carlos Nazabal Alsua
Manager

Issued date / *Fecha de emisión:*	05/12/2022
Update date / *Fecha de actualización:*	05/12/2022
Valid until / *Válido hasta:*	02/12/2027
Serial Nº / *Nº Serie:*	EPD0770100-E

This certificate is not valid without its related EPD.
Este certificado no es válido sin su correspondiente EPD.

El presente certificado está sujeto a modificaciones, suspensiones temporales y retiradas por TECNALIA R&I CERTIFICACION.
This certificate is subject to modifications, temporary suspensions and withdrawals by TECNALIA R&I CERTIFICACION.

El estado de vigencia del certificado puede confirmarse mediante consulta en www.tecnaliacertificacion.com.
The validity of this certificate can be checked through consultation in www.tecnaliacertificacion.com.

CERTIFICACIÓN ISO 17065 Nº125 / C-PR283

Tarimatec



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