In accordance with ISO 14025:2006 and ISO 21930:2017 standards for:
Exterior coating products manufactured by Pintuco at its plant located in Rionegro Antioquia, Colombia.

Environmental Product Declaration

Exterior Coating

Koraza Pro 550

Graniplast Premium Esgrafiado

Registration date: 05-09-2025

Valid until: 05-09-2030

Administrative information

Certified international environmental product declaration

Declared product:	One (1) square meter of exterior coating[1] coating for a period of 60 years	
EPD owner:	Pintuco Colombia Medellín–Bogotá Highway Rionegro Antioquia https://www.pintuco.com.co/	
LCA study:	Casostenible S.A.S Bogotá, Colombia www.casostenible.com	
Program operator:	Labeling Sustainability 11670 W Sunset Blvd Los Angeles, CA 90049 www.labelingsustainability.com	
Product category rule (PCR):	Architectural Coatings: NAICS 325510 Program operator: NSF International National Center for Sustainability Standards	
Independent LCA reviewer and EPD verifier:	Independent verification of the declaration, in accordance with the ISO 14025:2006 standard	
	Internal ☐ External ☒	
	Third party verifier	
	Denice V. Staaf, external verifier certified under Labeling Sustainability Program (www.labelingsustainability.com)	
Date of issue:	September 05, 2025	
Validity period:	5 years. Valid until September 05, 2030	
EPD number	PINCOLEXT09052500	

[1] In order to support comparative assertions, this EPD meets all comparability requirements stated in ISO 14025:2006. However, differences in certain assumptions, data quality, and variability between LCA data sets may still exist. As such, caution should be exercised when evaluating EPDs from different manufacturers, as the EPD results may not be entirely comparable. Any EPD comparison must be carried out at the building level per ISO 21930 guidelines. The results of this EPD reflect an average performance by the product and its actual impacts may vary on a case-to-case basis.

Company information

EPD owner: Pintuco Colombia

Contact:
Mabel Contreras
Mabel.Contreras@akzonobel.com

Description of the organization:
Pintuco® S.A.S. is a privately owned company with 80 years of experience, recognized as a market leader in the paints and coatings sector in Colombia. Throughout its history, it has played a pivotal role in the country's industrial, urban, and social development by providing reliable solutions for both infrastructure and the well-being of Colombian households.

With a solid presence in Central America and the Andean Region, Pintuco offers a comprehensive portfolio that meets the needs of the residential, institutional, road infrastructure, industrial, and architectural sectors. Its products are distinguished by their quality, cutting-edge technology, and environmentally responsible processes, enabling the company to effectively serve a wide range of clients across diverse markets.

Pintuco has a portfolio of leading brands across various categories:

• **Architectural Coatings**

- **Viniltex®**: A line of interior and exterior paints offering high coverage, washability, durability, and low-VOC formulations.
- **Koraza®**: Exterior solutions with high resistance to weathering, humidity, and UV rays, designed to protect and extend the life of building façades.

These paints are renowned for their innovation, quality, and performance for both interior and exterior applications. They are complemented by **Colortech®**, Pintuco's proprietary tinting system, which ensures color precision and variety.

• **Specialized Brands for Various Industrial Sectors**

- **International®**: A global brand of industrial and marine coatings from AkzoNobel, recognized for its leadership in protection solutions that extend asset life in key sectors such as infrastructure, oil and gas, energy generation, and marine industry.
- **Sikkens®**: A premium automotive brand offering solutions focused on efficiency, emissions reduction, and high-end aesthetic quality for refinishing on three pillars: services, products, and training.
- **Interpon®**: Solvent-free powder coatings that enable efficient low-temperature curing, reducing energy consumption and generating zero VOC (volatile organic compound) emissions.

Pintuco is part of **AkzoNobel**, a Dutch multinational company present in over 150 countries and globally recognized for delivering sustainable and innovative paints and coatings supported by world-class brands.

AkzoNobel is committed to being the global benchmark for sustainability in the industry, guided by science-based climate targets (SBTi) and a strategy on three pillars:

1. Producing sustainable and long-lasting solutions.
2. Helping customers become more sustainable.
3. Empowering communities and employees.

Pintuco actively contributes to these objectives through initiatives that promote the circular economy, reduce environmental impact, and foster collective well-being.

At Pintuco, we believe that purposeful innovation and active sustainability are key to positively transforming our industry and our environment.

Plant location: Rionegro, Antioquia - Colombia

Product information

UN CPC code: 3511 Paints and varnishes and related products.

Koraza Pro 550

Koraza ® PRO 550 is a high-resistance, water-based exterior paint made from 100% acrylic polymers with a matte finish, maximum protection against fungal attack, and high weather resistance. It forms a plastic barrier that makes it impervious to rain and resistant to sunlight.

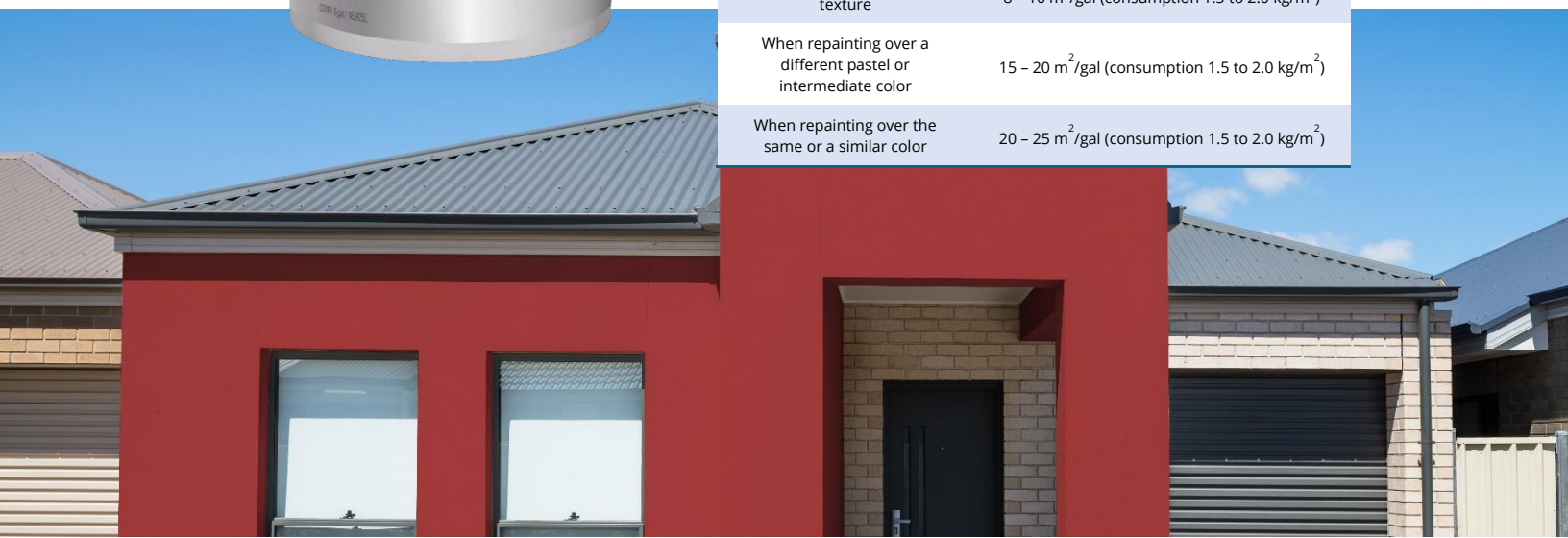
Koraza ® PRO 550 offers an estimated color retention life of up to 5 years, provided that the recommendations for surface preparation, application, and product maintenance are followed.

Uses

Recommended for outdoor environments, to decorate and protect facades, patios, and terraces; plastered, stuccoes, exposed block, tiles, and fiber cement sheets. Available in a wide range of colors.

Technical specifications

Viscosity	95 - 105	KU
Specular gloss 60° / 85°	5 - 10	UB
Density	5.09 – 5.19	kg/gal
Solids by volume	37.3 +/- 2	%
Solids by weight	54.4 +/- 2	%
Coverage (RC) %	96.5 - 100	%
Dirt pickup	< 1	Δ, E (%dirtiness)
Color retention	< 4	Delta E
Touch dry	0.5 - 1	Hours
Hand dry	2 - 4	Hours
VOC content* **	<100	kg/gal
APPROXIMATE PERFORMANCE**		
TYPE OF PERFORMANCE	**PRACTICAL PERFORMANCE**	
On unpainted plaster or texture	8 – 10 m^2/gal (consumption 1.5 to 2.0 kg/m^2)	
When repainting over a different pastel or intermediate color	15 – 20 m^2/gal (consumption 1.5 to 2.0 kg/m^2)	
When repainting over the same or a similar color	20 – 25 m^2/gal (consumption 1.5 to 2.0 kg/m^2)	



Graniplast Premium Esgrafiado

Graniplast® Premium Esgrafiado® is a textured, scratch-type finish paint made with 100% water-based acrylic copolymers and controlled-size quartz grains, which forms a barrier that is impervious to rain and resistant to sunlight, offering maximum protection, resistance, and durability of up to 5 years outdoors, provided that the recommendations for surface preparation and product application are followed.

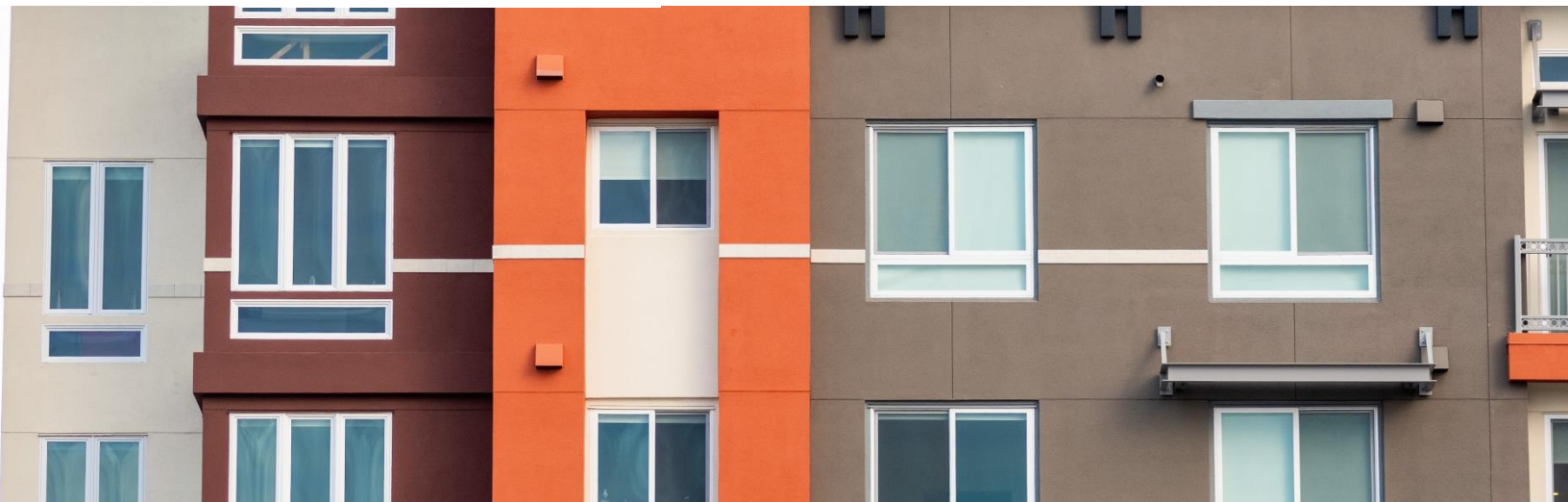
Uses

For the protection and decoration of interior and exterior surfaces. It has excellent adhesion to plaster, concrete, drywall, and fiber cement. It replaces the plaster and paint system on concrete facades when applied over Revomastic®. It should not be applied to metal surfaces.

Due to its thickness and wide range of colors, it can help improve indoor thermal comfort by preventing facades from heating up.

Technical Specifications

PROPERTY (METHOD)	VALUE	UNIT
Grain type	Coarse	
Density (ASTM D1475)	7.78 – 7.88	kg/gal
Viscosity at 25°C (ASTM D62)	135 - 141	PPU
VOC content***	≤15	kg/gal
Film thickness	2.5 – 3.0	pH
DRYING TIME AT 25°C		
Touch dry	4 - 6	h
Fully dry	48	h
APPROXIMATE PERFORMANCE**		
TYPE OF SURFACES	**PRACTICAL PERFORMANCE**	
Revomastic	8.5 – 10 m^2/30 kg barrel (consumption 3.0 to 3.5 kg/m^2)	
On concrete or plaster	8.0 – 8.5 m^2/30 kg barrel (consumption 3.5 to 3.8 kg/m^2)	



Content information

Product composition

The following is the general composition of the products analyzed in the Life Cycle Assessment (LCA) study. The information is grouped by functional categories of raw materials in order to protect the confidentiality of the formulations while providing a representative overview of the inputs used in their manufacture.

Koraza Pro 550

Raw materials	Approximate percentage
Pigments and mineral fillers	Confidential
Acrylic resins and binders	Confidential
Water and low-VOC solvents	Confidential
Functional additives (dispersants, thickeners, preservatives, coalescents)	Confidential
ther specialized additives	Confidential

Graniplast Premium Esgrafiado

Raw materials	Approximate percentage
Mineral fillers	Confidential
Deionized water	Confidential
Functional additives (thickeners, dispersants, preservatives, defoamers)	Confidential
Coalescents and wetting agents	Confidential

VOC Content

The following summary table presents the VOC content determined according to ASTM D6886 and SCAQMD Method 313.

Product	Type	VOC ASTM D6886 (g/L)
Koraza Pro 550	White	44.93
	Pastel	42.35
	Tint (Mid)	34.69
	Deep	22.23
	Accent	15.51
Graniplast Premium Esgrafiado	Neutral	15.00

Packaging

For the purposes of the life cycle analysis, a can-type container was considered as the representative packaging material used in the marketing of the products evaluated. The impact associated with this material was assigned proportionally to the declared functional unit (1 m^2 of product).

LCA information

Funtional unit (FU): 1 m^2 of exterior coating for a period of 60 years (the assumed lifetime of a building)

The quality levels and corresponding coating quantities for Pintuco exterior coatings were determined based on available durability test results. Where no test data were available, the coatings were conservatively classified under the "low quality" category, in line with the reference PCR.

In accordance with PCR requirements, the number of applications needed over the 60-year reference service life of a building was considered to ensure the functional unit is satisfied. The resulting lifetimes and quantities required for each product are summarized in the following table.

					Number of coatings to satisfy FU (includes first time)		Total Caoting per FU (kg/m²)	
Product	**Type**	***Market-Based Lifetime* (Years)**	***Design life* (Years)**	**Coating per unit area (kg/m²**	*Market-Based Lifetime*	*Design life*	*Market-Based Lifetime*	*Design life*
Koraza Pro 550	Exterior	10	5	0,64	6	12	3,84	7,68
Graniplast Premium Esgrafiado	Exterior	10	5	3,75	6	12	22,5	45

As required by the reference PCR, the inventory for colorants in Pintuco coatings was modeled using the GaBi dataset for carbon black pigment, applied in the quantity specified for each type of coating base. The amounts considered for each product are presented in table below. Since reliable life cycle inventories are not widely available for most colorants, the standardized carbon black dataset was applied to ensure consistency and comparability across all product formulas.

						Colorant required to satisfy the FU (g/m²) (Excludes first application)	
Product	**Interior/Exterior**	**Type**	**PCR Reference**	**Amount of colorant (g/L)**	**Colorant required to satisfy the first application (g/m²)**	**In design lifespan**	**In market lifespan**
Koraza Pro 550	Exterior	Blanco	-	-	-	-	-
		Pastel	Pastel Base	66,29	31,24	343,67	156,21
		Tint (Mid)	Mid Base	89,34	42,11	463,21	210,55
		Deep	Deep Base	112,40	52,98	582,75	264,89
		Accent	Accent Base	134,01	63,17	694,82	315,83
Graniplast Premium Esgrafiado	Exterior	Pastel	Pastel Base	66,29	120,17	1321,89	600,86
		Tint (Mid)	Mid Base	89,34	161,97	1781,68	809,86
		Deep	Deep Base	112,40	203,77	2241,47	1018,85
		Accent	Accent Base	134,01	242,96	2672,53	1214,78

LCA type: Cradle to grave.

Representativeness over time: The life cycle analysis inventory data represents production for the 12 months of 2024.

LCA data and software used: The data and software used to perform the life cycle analysis were Ecoinvent 3.10 and SimaPro 9.6, and the built-in system model *"Allocation cut-off by classification" was also used.*

Summary of data quality assessment: Data quality was assessed on criteria of geographical, technical, and temporal representativeness, as well as in terms of accuracy, completeness, consistency, and traceability of the source. For raw material consumption and transport distances were provided directly by Pintuco and supplemented with secondary datasets from the Ecoinvent 3.10 data (updated to December 2024), which were regionalized to adequately reflect the conditions of the production sites. Although the datasets are secondary in nature at these stages, the quantities used correspond to actual and specific values for the process.

In manufacturing stage, primary data collected by Pintuco at its production plant located in Rionegro, Antioquia, during 2024 was used. The data quality assessment was carried out in accordance with the guidelines established in Annex E, Table E.1 of standard EN 15804:2012+A2:2019/AC:2021.

System boundaries

Description of System Boundaries													
Stage 1 Product Stage (Modules 1-3)			**Stage 2 Design & Construction Stage** (Modules 4-5)	**Stage 3 Use & Maintenance Stage** (Modules 6-10)						**Stage 4 End-of-Life Stage** (Modules 11-14)			
A1	**A2**	**A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**C1**	**C2**	**C3**	**C4**
Extraction and upstream production	Transport to factory	Manufacturing	Transport to site	Installation	Use	Maintenance	Repair	Replacement	Refurbishment	De-construction / Demolition	Transport to waste processing or disposal	Waste processing	Disposal of waste
					B6-Operational energy use								
					B7-Operational water use								
•	•	•	•	•	•	•	•	•	•	•	•	•	•

Description of system boundaries

Stage 1. Product stage

Raw material manufacturing: This stage of the life cycle covers all environmental aspects associated with the extraction, processing, and transformation of raw materials, from the sourcing of natural resources to their departure from the supplier's facilities as inputs ready to be used in the formulation of coatings.

It also includes the energy consumption associated with this phase, which is 100% renewable electricity, consisting of self-generation (photovoltaic system) and other I-REC-certified sources, as well as the use of fossil fuels at the supplier's facilities for the internal transport of raw materials and supplies.

Transportation of raw material to Plant: This stage refers to the transportation of raw materials and inputs from their place of production (supplier) to the Pintuco plant in Rionegro, Antioquia. It considers the various modes of transport used by manufacturers and distributors, including maritime and land transport for imported raw materials and inputs, and land transport for those of national origin.

Coating Manufacturing: This stage includes all operations carried out at the Pintuco plant for the production of coatings, encompassing dosing, dispersion, dilution, and packaging. It also considers auxiliary inputs required during the process, as well as the management, transport, and final disposal of waste generated during the manufacturing phase.

Stage 2. Design & Construction Stage

Considers the distribution of finished products from the manufacturing facility to distribution centers, to points of sale, and finally to the application site. Default transport distances and vehicle types recommended by the PCR are applied.

Stage 3. Use & Maintenance Stage

Coating application: The first application of the coating to the substrate is included in the system boundary. The amount of coating required is determined by the declared coverage rates to satisfy the functional unit. Installation activities beyond the application itself (e.g., tools, labor, energy, and water use) are excluded, consistent with PCR guidance.

Emissions from drying: VOC content values are declared for each coating. However, direct VOC emissions during application and drying are not modeled due to the absence of laboratory data on emission factors. This constitutes a data limitation of the study.

Necessary repairs and reapplications: To maintain the protective function of the coating over the 60-year reference service life, periodic reapplications are included. The frequency of reapplications is determined by the product’s design life and market life, following PCR

assumptions for low-quality designation when laboratory durability data are not available. No additional maintenance activities beyond reapplication are modeled.

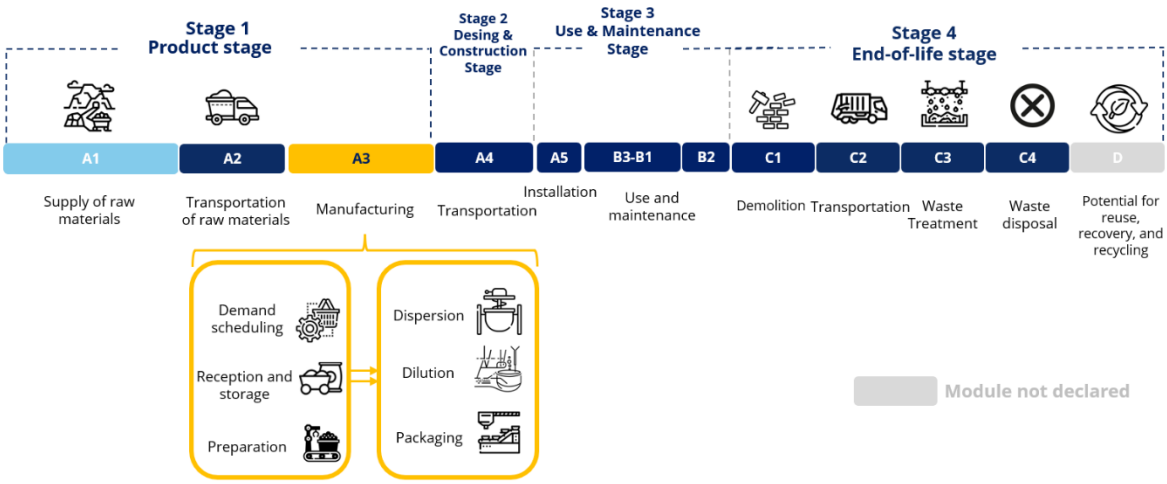
Stage 4. End-of-life stage

The end-of-life stage begins once any unused or applied coating, together with its primary packaging, enters the waste stream. In line with the PCR, this stage considers only transportation to the disposal site (C2) and end-of-life management (C3–C4). Secondary packaging such as pallets and wrapping is excluded from the system boundary.

Transportation to Disposal Site (C2): For waste transport, a distance of 11.27 km was applied, representing the greatest distance between the largest sales cities in Colombia and authorized disposal sites. Transport was modeled with a EURO 4 heavy-duty truck (16–32 t capacity), assuming round trips with empty returns.

End-of-Life Management (C3–C4): Applied coatings remain adhered to the substrate and are disposed of jointly with it as inert mass, without separate treatment. It is assumed that 10% of the coating mass remains unused and is discarded directly. Primary packaging, made of plastics, is modeled with a 9% recycling rate; the remaining 91% is distributed as 82% to landfill and 18% to incineration, following PCR defaults.

System diagram



Cut-off criteria

- The life cycle analysis includes the product, end-of-life, and benefit stages, as well as loads beyond the system boundary.
- The study does not exclude any module or process that is established as mandatory in ISO 21930:2017.
- The study includes all major raw material and energy consumption of unit processes.

- All inputs and outputs of unit processes for which data is available and recorded for 12 months in 2024 were included in the calculations.
- The total excluded input and output flows do not exceed 5% of energy use or mass relative to the total weight of the product.
- According to NSF International's Architectural Coatings PCR: NAICS 325510, secondary packaging such as pallets and stretch wrap are excluded from the analysis.

Allocation, estimation, and assumptions

In this study, according to ISO 14044:2006, allocation is carried out according to the following steps:

1. Avoid allocation.
2. Allocation should bed on the physical properties of the inputs and outputs of the system (e.g., mass, volume).
3. If allocation cannot be maded on physical properties, inputs and outputs could be allocated among co-products in proportion to the economic value of the products.

This LCA study is carried out in accordance with all methodological considerations, such as system boundaries, data quality, mass allocations, and percentages below 1% to evaluate inputs and outputs.

Some of the assumptions were as follows:

- The total energy consumption reported for the water plant was allocated proportionally to the products under analysis on production volumes for the year 2024. This allocation ensures a representative distribution of energy resource consumption throughout the value chain.
- The characterization of emissions to water was carried out specifically for each stream of the plant's wastewater treatment system on this data and considering the production volumes of each formulation, a precise allocation was made that reflects the relative contribution of each product to the treated water discharges.

Regarding the assumptions adopted to complete the inventory information:

- In cases where detailed information on the port of departure of imported raw materials or inputs was not available, the seaport closest to the manufacturer's official address was assumed as a reference in order to conservatively represent the distances involved in the international transport stage.
- For raw materials and inputs of international origin, the port of Barranquilla was established as the point of entry into Colombia, given its relevance as the main logistics hub for imports of this type of product.

Results

Life cycle impact assessment indicators for 1 m2 of exterior coating for a period of 60 years

Disclaimers:

- The results of the end-of-life stage (module C) should be taken into account when using the results of the production stage (modules Al-A3).
- The environmental performance results are relative expressions and do not predict impacts on category endpoints, threshold exceedances, safety margins, or risks.

Koraza Pro 550

Global Warming Potential (kg CO2 eq) - TRACI 2.1 IPCC 2007						
Design life		Koraza Pro 550 White	Koraza Pro 550 Pastel	Koraza Pro 550 Tint (Mid)	Koraza Pro 550 Deep	Koraza Pro 550 Accent
Stage 1. Product	A1-A3	1.38E+00	1.32E+00	1.30E+00	1.16E+00	1.08E+00
Stage 2. Desing & Construction	A4	1.42E-01	1.42E-01	1.42E-01	1.42E-01	1.42E-01
Stage 3. Use & Maintenance	A5 - B7	1.52E+01	1.46E+01	1.43E+01	1.27E+01	1.19E+01
Stage 4. End-of-life	C1 - C4	2.24E-01	2.24E-01	2.24E-01	2.24E-01	2.24E-01
Total	Life Cycle	1.69E+01	1.63E+01	1.59E+01	1.43E+01	1.33E+01

Global Warming Potential (kg CO2 eq) - TRACI 2.1 IPCC 2007						
Market Life		Koraza Pro 550 White	Koraza Pro 550 Pastel	Koraza Pro 550 Tint (Mid)	Koraza Pro 550 Deep	Koraza Pro 550 Accent
Stage 1. Product	A1-A3	1.38E+00	1.32E+00	1.30E+00	1.16E+00	1.08E+00
Stage 2. Desing & Construction	A4	1.42E-01	1.42E-01	1.42E-01	1.42E-01	1.42E-01
Stage 3. Use & Maintenance	A5 - B7	6.91E+00	6.62E+00	6.48E+00	5.79E+00	5.40E+00
Stage 4. End-of-life	C1 - C4	1.12E-01	1.12E-01	1.12E-01	1.12E-01	1.12E-01
Total	Life Cycle	8.54E+00	8.20E+00	8.04E+00	7.21E+00	6.73E+00

Global Warming Potential - Total (kg CO2 eq) Including Biogenic Carbon - EN 15804 +A2 (adapted) - IPCC 2021						
Design life		Koraza Pro 550 White	Koraza Pro 550 Pastel	Koraza Pro 550 Tint (Mid)	Koraza Pro 550 Deep	Koraza Pro 550 Accent
Stage 1. Product	A1-A3	1.38E+00	1.33E+00	1.30E+00	1.15E+00	1.07E+00
Stage 2. Desing & Construction	A4	1.42E-01	1.42E-01	1.42E-01	1.42E-01	1.42E-01
Stage 3. Use & Maintenance	A5 - B7	1.52E+01	1.46E+01	1.43E+01	1.27E+01	1.18E+01
Stage 4. End-of-life	C1 - C4	2.23E-01	2.23E-01	2.23E-01	2.23E-01	2.23E-01
Total	Life Cycle	1.70E+01	1.63E+01	1.59E+01	1.42E+01	1.32E+01

Global Warming Potential - Total (kg CO2 eq) Including Biogenic Carbon - EN 15804 +A2 (adapted) - IPCC 2021						
Market Life		Koraza Pro 550 White	Koraza Pro 550 Pastel	Koraza Pro 550 Tint (Mid)	Koraza Pro 550 Deep	Koraza Pro 550 Accent
Stage 1. Product	A1-A3	1.38E+00	1.33E+00	1.30E+00	1.15E+00	1.07E+00
Stage 2. Desing & Construction	A4	1.42E-01	1.42E-01	1.42E-01	1.42E-01	1.42E-01
Stage 3. Use & Maintenance	A5 - B7	6.92E+00	6.63E+00	6.48E+00	5.76E+00	5.35E+00
Stage 4. End-of-life	C1 - C4	1.11E-01	1.11E-01	1.11E-01	1.11E-01	1.11E-01
Total	Life Cycle	8.55E+00	8.21E+00	8.03E+00	7.17E+00	6.68E+00

Global Warming Potential - Biogenic (kg CO2 eq) - EN 15804 +A2 (adapted) - IPCC 2021						
Design life		Koraza Pro 550 White	Koraza Pro 550 Pastel	Koraza Pro 550 Tint (Mid)	Koraza Pro 550 Deep	Koraza Pro 550 Accent
Stage 1. Product	A1-A3	1.16E-08	1.09E-08	5.08E-08	4.08E-08	2.70E-06
Stage 2. Desing & Construction	A4	2.18E-09	2.18E-09	2.18E-09	2.18E-09	2.18E-09
Stage 3. Use & Maintenance	A5 - B7	1.28E-07	1.20E-07	5.59E-07	4.49E-07	2.97E-05
Stage 4. End-of-life	C1 - C4	5.23E-10	5.23E-10	5.23E-10	5.23E-10	5.23E-10
Total	Life Cycle	1.42E-07	1.33E-07	6.13E-07	4.93E-07	3.24E-05

Global Warming Potential - Biogenic (kg CO2 eq) - EN 15804 +A2 (adapted) - IPCC 2021						
Market Life		Koraza Pro 550 White	Koraza Pro 550 Pastel	Koraza Pro 550 Tint (Mid)	Koraza Pro 550 Deep	Koraza Pro 550 Accent
Stage 1. Product	A1-A3	1.16E-08	1.09E-08	5.08E-08	4.08E-08	2.70E-06
Stage 2. Desing & Construction	A4	2.18E-09	2.18E-09	2.18E-09	2.18E-09	2.18E-09
Stage 3. Use & Maintenance	A5 - B7	5.82E-08	5.43E-08	2.54E-07	2.04E-07	1.35E-05
Stage 4. End-of-life	C1 - C4	2.61E-10	2.61E-10	2.61E-10	2.61E-10	2.61E-10
Total	Life Cycle	7.22E-08	6.76E-08	3.07E-07	2.47E-07	1.62E-05

Ozone Depletion Potential (kg CFC 11 eq)						
Design life		Koraza Pro 550 White	Koraza Pro 550 Pastel	Koraza Pro 550 Tint (Mid)	Koraza Pro 550 Deep	Koraza Pro 550 Accent
Stage 1. Product	A1-A3	1.16E-08	1.09E-08	5.08E-08	4.08E-08	2.70E-06
Stage 2. Desing & Construction	A4	2.18E-09	2.18E-09	2.18E-09	2.18E-09	2.18E-09
Stage 3. Use & Maintenance	A5 - B7	1.28E-07	1.20E-07	5.59E-07	4.49E-07	2.97E-05
Stage 4. End-of-life	C1 - C4	5.23E-10	5.23E-10	5.23E-10	5.23E-10	5.23E-10
Total	Life Cycle	1.42E-07	1.33E-07	6.13E-07	4.93E-07	3.24E-05

Ozone Depletion Potential (kg CFC 11 eq)						
Market Life		Koraza Pro 550 White	Koraza Pro 550 Pastel	Koraza Pro 550 Tint (Mid)	Koraza Pro 550 Deep	Koraza Pro 550 Accent
Stage 1. Product	A1-A3	1.16E-08	1.09E-08	5.08E-08	4.08E-08	2.70E-06
Stage 2. Desing & Construction	A4	2.18E-09	2.18E-09	2.18E-09	2.18E-09	2.18E-09
Stage 3. Use & Maintenance	A5 - B7	5.82E-08	5.43E-08	2.54E-07	2.04E-07	1.35E-05
Stage 4. End-of-life	C1 - C4	2.61E-10	2.61E-10	2.61E-10	2.61E-10	2.61E-10
Total	Life Cycle	7.22E-08	6.76E-08	3.07E-07	2.47E-07	1.62E-05

Acidification Potential (kg SO2 eq)						
Design life		Koraza Pro 550 White	Koraza Pro 550 Pastel	Koraza Pro 550 Tint (Mid)	Koraza Pro 550 Deep	Koraza Pro 550 Accent
Stage 1. Product	A1-A3	1.03E-02	9.80E-03	9.25E-03	6.79E-03	5.35E-03
Stage 2. Desing & Construction	A4	4.69E-04	4.69E-04	4.69E-04	4.69E-04	4.69E-04
Stage 3. Use & Maintenance	A5 - B7	1.14E-01	1.08E-01	1.02E-01	7.47E-02	5.89E-02
Stage 4. End-of-life	C1 - C4	1.99E-04	1.99E-04	1.99E-04	1.99E-04	1.99E-04
Total	Life Cycle	1.25E-01	1.18E-01	1.12E-01	8.21E-02	6.49E-02

Acidification Potential (kg SO2 eq)						
Market Life		Koraza Pro 550 White	Koraza Pro 550 Pastel	Koraza Pro 550 Tint (Mid)	Koraza Pro 550 Deep	Koraza Pro 550 Accent
Stage 1. Product	A1-A3	1.03E-02	9.80E-03	9.25E-03	6.79E-03	5.35E-03
Stage 2. Desing & Construction	A4	4.69E-04	4.69E-04	4.69E-04	4.69E-04	4.69E-04
Stage 3. Use & Maintenance	A5 - B7	5.17E-02	4.90E-02	4.63E-02	3.39E-02	2.68E-02
Stage 4. End-of-life	C1 - C4	9.96E-05	9.96E-05	9.96E-05	9.96E-05	9.96E-05
Total	Life Cycle	6.27E-02	5.94E-02	5.61E-02	4.13E-02	3.27E-02

Eutrophication Potential (kg N eq)						
Design life		Koraza Pro 550 White	Koraza Pro 550 Pastel	Koraza Pro 550 Tint (Mid)	Koraza Pro 550 Deep	Koraza Pro 550 Accent
Stage 1. Product	A1-A3	1.21E-03	1.13E-03	1.14E-03	9.12E-04	7.99E-04
Stage 2. Desing & Construction	A4	3.13E-05	3.13E-05	3.13E-05	3.13E-05	3.13E-05
Stage 3. Use & Maintenance	A5 - B7	1.33E-02	1.25E-02	1.25E-02	1.00E-02	8.79E-03
Stage 4. End-of-life	C1 - C4	4.90E-05	4.90E-05	4.90E-05	4.90E-05	4.90E-05
Total	Life Cycle	1.46E-02	1.37E-02	1.37E-02	1.10E-02	9.67E-03

Eutrophication Potential (kg N eq)						
Market Life		Koraza Pro 550 White	Koraza Pro 550 Pastel	Koraza Pro 550 Tint (Mid)	Koraza Pro 550 Deep	Koraza Pro 550 Accent
Stage 1. Product	A1-A3	1.21E-03	1.13E-03	1.14E-03	9.12E-04	7.99E-04
Stage 2. Desing & Construction	A4	3.13E-05	3.13E-05	3.13E-05	3.13E-05	3.13E-05
Stage 3. Use & Maintenance	A5 - B7	6.03E-03	5.66E-03	5.69E-03	4.56E-03	3.99E-03
Stage 4. End-of-life	C1 - C4	2.45E-05	2.45E-05	2.45E-05	2.45E-05	2.45E-05
Total	Life Cycle	7.29E-03	6.85E-03	6.88E-03	5.53E-03	4.85E-03

Potential for creating photochemical oxidants (smog) (kg O3 eq)						
Design life		Koraza Pro 550 White	Koraza Pro 550 Pastel	Koraza Pro 550 Tint (Mid)	Koraza Pro 550 Deep	Koraza Pro 550 Accent
Stage 1. Product	A1-A3	7.42E-02	7.06E-02	6.88E-02	5.64E-02	4.98E-02
Stage 2. Desing & Construction	A4	1.33E-02	1.33E-02	1.33E-02	1.33E-02	1.33E-02
Stage 3. Use & Maintenance	A5 - B7	8.16E-01	7.76E-01	7.57E-01	6.21E-01	5.47E-01
Stage 4. End-of-life	C1 - C4	5.92E-03	5.92E-03	5.92E-03	5.92E-03	5.92E-03
Total	Life Cycle	9.10E-01	8.66E-01	8.45E-01	6.96E-01	6.16E-01

Potential for creating photochemical oxidants (smog) (kg O3 eq)						
Market Life		Koraza Pro 550 White	Koraza Pro 550 Pastel	Koraza Pro 550 Tint (Mid)	Koraza Pro 550 Deep	Koraza Pro 550 Accent
Stage 1. Product	A1-A3	7.42E-02	7.06E-02	6.88E-02	5.64E-02	4.98E-02
Stage 2. Desing & Construction	A4	1.33E-02	1.33E-02	1.33E-02	1.33E-02	1.33E-02
Stage 3. Use & Maintenance	A5 - B7	3.71E-01	3.53E-01	3.44E-01	2.82E-01	2.49E-01
Stage 4. End-of-life	C1 - C4	2.96E-03	2.96E-03	2.96E-03	2.96E-03	2.96E-03
Total	Life Cycle	4.62E-01	4.40E-01	4.29E-01	3.55E-01	3.15E-01

Graniplast Premium Esgrafiado

Global Warming Potential (kg CO2 eq) - TRACI 2.1 IPCC 2007					
Design life		Graniplast Esgrafiado Premium Pastel	Graniplast Esgrafiado Premium Tint (Mid)	Graniplast Esgrafiado Premium Deep	Graniplast Esgrafiado Premium Accent
Stage 1. Product	A1-A3	2.30E+00	2.28E+00	2.26E+00	2.25E+00
Stage 2. Desing & Construction	A4	8.32E-01	8.32E-01	8.32E-01	8.32E-01
Stage 3. Use & Maintenance	A5 - B7	2.53E+01	2.51E+01	2.49E+01	2.47E+01
Stage 4. End-of-life	C1 - C4	1.09E+00	1.09E+00	1.09E+00	1.09E+00
Total	Life Cycle	2.95E+01	2.93E+01	2.91E+01	2.89E+01

Global Warming Potential (kg CO2 eq) - TRACI 2.1 IPCC 2007					
Market Life		Graniplast Esgrafiado Premium Pastel	Graniplast Esgrafiado Premium Tint (Mid)	Graniplast Esgrafiado Premium Deep	Graniplast Esgrafiado Premium Accent
Stage 1. Product	A1-A3	2.30E+00	2.28E+00	2.26E+00	2.25E+00
Stage 2. Desing & Construction	A4	8.32E-01	8.32E-01	8.32E-01	8.32E-01
Stage 3. Use & Maintenance	A5 - B7	1.15E+01	1.14E+01	1.13E+01	1.12E+01
Stage 4. End-of-life	C1 - C4	5.44E-01	5.44E-01	5.44E-01	5.44E-01
Total	Life Cycle	1.52E+01	1.51E+01	1.50E+01	1.49E+01

Global Warming Potential - Total (kg CO2 eq) Including Biogenic Carbon - EN 15804 +A2 (adapted) - IPCC 2021					
Design life		Graniplast Esgrafiado Premium Pastel	Graniplast Esgrafiado Premium Tint (Mid)	Graniplast Esgrafiado Premium Deep	Graniplast Esgrafiado Premium Accent
Stage 1. Product	A1-A3	2.30E+00	2.28E+00	2.26E+00	2.25E+00
Stage 2. Desing & Construction	A4	8.31E-01	8.31E-01	8.31E-01	8.31E-01
Stage 3. Use & Maintenance	A5 - B7	2.53E+01	2.51E+01	2.49E+01	2.47E+01
Stage 4. End-of-life	C1 - C4	1.08E+00	1.08E+00	1.08E+00	1.08E+00
Total	Life Cycle	2.95E+01	2.93E+01	2.91E+01	2.89E+01

Global Warming Potential - Total (kg CO2 eq) Including Biogenic Carbon - EN 15804 +A2 (adapted) - IPCC 2021					
Market Life		Graniplast Esgrafiado Premium Pastel	Graniplast Esgrafiado Premium Tint (Mid)	Graniplast Esgrafiado Premium Deep	Graniplast Esgrafiado Premium Accent
Stage 1. Product	A1-A3	2.30E+00	2.28E+00	2.26E+00	2.25E+00
Stage 2. Desing & Construction	A4	8.31E-01	8.31E-01	8.31E-01	8.31E-01
Stage 3. Use & Maintenance	A5 - B7	1.15E+01	1.14E+01	1.13E+01	1.12E+01
Stage 4. End-of-life	C1 - C4	5.40E-01	5.40E-01	5.40E-01	5.40E-01
Total	Life Cycle	1.52E+01	1.51E+01	1.50E+01	1.49E+01

Global Warming Potential - Biogenic (kg CO2 eq) - EN 15804 +A2 (adapted) - IPCC 2021					
Design life		Graniplast Esgrafiado Premium Pastel	Graniplast Esgrafiado Premium Tint (Mid)	Graniplast Esgrafiado Premium Deep	Graniplast Esgrafiado Premium Accent
Stage 1. Product	A1-A3	3.11E-08	3.11E-08	3.11E-08	3.11E-08
Stage 2. Desing & Construction	A4	1.28E-08	1.28E-08	1.28E-08	1.28E-08
Stage 3. Use & Maintenance	A5 - B7	3.42E-07	3.42E-07	3.42E-07	3.42E-07
Stage 4. End-of-life	C1 - C4	3.34E-09	3.34E-09	3.34E-09	3.34E-09
Total	Life Cycle	3.89E-07	3.89E-07	3.89E-07	3.89E-07

Global Warming Potential - Biogenic (kg CO2 eq) - EN 15804 +A2 (adapted) - IPCC 2021					
Market Life		Graniplast Esgrafiado Premium Pastel	Graniplast Esgrafiado Premium Tint (Mid)	Graniplast Esgrafiado Premium Deep	Graniplast Esgrafiado Premium Accent
Stage 1. Product	A1-A3	3.11E-08	3.11E-08	3.11E-08	3.11E-08
Stage 2. Desing & Construction	A4	1.28E-08	1.28E-08	1.28E-08	1.28E-08
Stage 3. Use & Maintenance	A5 - B7	1.56E-07	1.55E-07	1.55E-07	1.55E-07
Stage 4. End-of-life	C1 - C4	1.66E-09	1.66E-09	1.66E-09	1.66E-09
Total	Life Cycle	2.01E-07	2.01E-07	2.01E-07	2.01E-07

Ozone Depletion Potential (kg CFC 11 eq)					
Design life		Graniplast Esgrafiado Premium Pastel	Graniplast Esgrafiado Premium Tint (Mid)	Graniplast Esgrafiado Premium Deep	Graniplast Esgrafiado Premium Accent
Stage 1. Product	A1-A3	3.11E-08	3.11E-08	3.11E-08	3.11E-08
Stage 2. Desing & Construction	A4	1.28E-08	1.28E-08	1.28E-08	1.28E-08
Stage 3. Use & Maintenance	A5 - B7	3.42E-07	3.42E-07	3.42E-07	3.42E-07
Stage 4. End-of-life	C1 - C4	3.34E-09	3.34E-09	3.34E-09	3.34E-09
Total	Life Cycle	3.89E-07	3.89E-07	3.89E-07	3.89E-07

Ozone Depletion Potential (kg CFC 11 eq)					
Market Life		Graniplast Esgrafiado Premium Pastel	Graniplast Esgrafiado Premium Tint (Mid)	Graniplast Esgrafiado Premium Deep	Graniplast Esgrafiado Premium Accent
Stage 1. Product	A1-A3	3.11E-08	3.11E-08	3.11E-08	3.11E-08
Stage 2. Desing & Construction	A4	1.28E-08	1.28E-08	1.28E-08	1.28E-08
Stage 3. Use & Maintenance	A5 - B7	1.56E-07	1.55E-07	1.55E-07	1.55E-07
Stage 4. End-of-life	C1 - C4	1.66E-09	1.66E-09	1.66E-09	1.66E-09
Total	Life Cycle	2.01E-07	2.01E-07	2.01E-07	2.01E-07

Acidification Potential (kg SO2 eq)					
Design life		Graniplast Esgrafiado Premium Pastel	Graniplast Esgrafiado Premium Tint (Mid)	Graniplast Esgrafiado Premium Deep	Graniplast Esgrafiado Premium Accent
Stage 1. Product	A1-A3	1.06E-02	1.05E-02	1.04E-02	1.03E-02
Stage 2. Desing & Construction	A4	2.75E-03	2.75E-03	2.75E-03	2.75E-03
Stage 3. Use & Maintenance	A5 - B7	1.17E-01	1.16E-01	1.15E-01	1.14E-01
Stage 4. End-of-life	C1 - C4	1.39E-03	1.39E-03	1.39E-03	1.39E-03
Total	Life Cycle	1.31E-01	1.30E-01	1.29E-01	1.28E-01

Acidification Potential (kg SO2 eq)					
Market Life		Graniplast Esgrafiado Premium Pastel	Graniplast Esgrafiado Premium Tint (Mid)	Graniplast Esgrafiado Premium Deep	Graniplast Esgrafiado Premium Accent
Stage 1. Product	A1-A3	1.06E-02	1.05E-02	1.04E-02	1.03E-02
Stage 2. Desing & Construction	A4	2.75E-03	2.75E-03	2.75E-03	2.75E-03
Stage 3. Use & Maintenance	A5 - B7	5.30E-02	5.25E-02	5.21E-02	5.16E-02
Stage 4. End-of-life	C1 - C4	6.92E-04	6.92E-04	6.92E-04	6.92E-04
Total	Life Cycle	6.70E-02	6.65E-02	6.59E-02	6.54E-02

Eutrophication Potential (kg N eq)					
Design life		Graniplast Esgrafiado Premium Pastel	Graniplast Esgrafiado Premium Tint (Mid)	Graniplast Esgrafiado Premium Deep	Graniplast Esgrafiado Premium Accent
Stage 1. Product	A1-A3	1.39E-03	1.37E-03	1.36E-03	1.35E-03
Stage 2. Desing & Construction	A4	1.84E-04	1.84E-04	1.84E-04	1.84E-04
Stage 3. Use & Maintenance	A5 - B7	1.52E-02	1.51E-02	1.49E-02	1.48E-02
Stage 4. End-of-life	C1 - C4	2.48E-04	2.48E-04	2.48E-04	2.48E-04
Total	Life Cycle	1.71E-02	1.69E-02	1.67E-02	1.66E-02

Eutrophication Potential (kg N eq)					
Market Life		Graniplast Esgrafiado Premium Pastel	Graniplast Esgrafiado Premium Tint (Mid)	Graniplast Esgrafiado Premium Deep	Graniplast Esgrafiado Premium Accent
Stage 1. Product	A1-A3	1.39E-03	1.37E-03	1.36E-03	1.35E-03
Stage 2. Desing & Construction	A4	1.84E-04	1.84E-04	1.84E-04	1.84E-04
Stage 3. Use & Maintenance	A5 - B7	6.93E-03	6.86E-03	6.80E-03	6.73E-03
Stage 4. End-of-life	C1 - C4	1.24E-04	1.24E-04	1.24E-04	1.24E-04
Total	Life Cycle	8.62E-03	8.54E-03	8.46E-03	8.39E-03

Potential for creating photochemical oxidants (smog) (kg O3 eq)					
Design life		Graniplast Esgrafiado Premium Pastel	Graniplast Esgrafiado Premium Tint (Mid)	Graniplast Esgrafiado Premium Deep	Graniplast Esgrafiado Premium Accent
Stage 1. Product	A1-A3	1.29E-01	1.28E-01	1.27E-01	1.25E-01
Stage 2. Desing & Construction	A4	7.78E-02	7.78E-02	7.78E-02	7.78E-02
Stage 3. Use & Maintenance	A5 - B7	1.42E+00	1.40E+00	1.39E+00	1.38E+00
Stage 4. End-of-life	C1 - C4	4.18E-02	4.18E-02	4.18E-02	4.18E-02
Total	Life Cycle	1.66E+00	1.65E+00	1.64E+00	1.63E+00

Potential for creating photochemical oxidants (smog) (kg O3 eq)					
Market Life		Graniplast Esgrafiado Premium Pastel	Graniplast Esgrafiado Premium Tint (Mid)	Graniplast Esgrafiado Premium Deep	Graniplast Esgrafiado Premium Accent
Stage 1. Product	A1-A3	1.29E-01	1.28E-01	1.27E-01	1.25E-01
Stage 2. Desing & Construction	A4	7.78E-02	7.78E-02	7.78E-02	7.78E-02
Stage 3. Use & Maintenance	A5 - B7	6.44E-01	6.38E-01	6.33E-01	6.27E-01
Stage 4. End-of-life	C1 - C4	2.09E-02	2.09E-02	2.09E-02	2.09E-02
Total	Life Cycle	8.71E-01	8.65E-01	8.58E-01	8.51E-01

Environmental Results for Energy, Resources, and Waste — Maximum Impact vs. Average

Depletion of Non-Renewable Energy Resources (MJ)			
Design Life		Maximum Value	Average Value
Stage 1. Product	A1-A3	4.49E+00	3.21E+00
Stage 2. Desing & Construction	A4	1.57E+00	8.47E-01
Stage 3. Use & Maintenance	A5 - B7	4.94E+01	3.53E+01
Stage 4. End-of-life	C1 - C4	4.49E-01	2.36E-01
Total	Life Cycle	5.59E+01	3.96E+01

Depletion of Non-Renewable Energy Resources (MJ)			
Market Life		Maximum Value	Average Value
Stage 1. Product	A1-A3	4.49E+00	3.21E+00
Stage 2. Desing & Construction	A4	1.57E+00	8.47E-01
Stage 3. Use & Maintenance	A5 - B7	2.25E+01	1.60E+01
Stage 4. End-of-life	C1 - C4	2.24E-01	1.18E-01
Total	Life Cycle	2.87E+01	2.02E+01

Depletion Non-Renewable Material Resources (kg)			
Design Life		Maximum Value	Average Value
Stage 1. Product	A1-A3	1.57E-05	1.10E-05
Stage 2. Desing & Construction	A4	4.91E-08	2.65E-08
Stage 3. Use & Maintenance	A5 - B7	1.73E-04	1.21E-04
Stage 4. End-of-life	C1 - C4	3.36E-08	1.84E-08
Total	Life Cycle	1.89E-04	1.32E-04

Depletion Non-Renewable Material Resources (kg)			
Market Life		Maximum Value	Average Value
Stage 1. Product	A1-A3	1.57E-05	1.10E-05
Stage 2. Desing & Construction	A4	4.91E-08	2.65E-08
Stage 3. Use & Maintenance	A5 - B7	7.87E-05	5.51E-05
Stage 4. End-of-life	C1 - C4	1.68E-08	9.18E-09
Total	Life Cycle	9.44E-05	6.61E-05

Use of Renewable Material Resources (kg)			
Design Life		Maximum Value	Average Value
Stage 1. Product	A1-A3	2.03E+00	1.38E+00
Stage 2. Desing & Construction	A4	1.18E+01	6.38E+00
Stage 3. Use & Maintenance	A5 - B7	4.24E+02	3.08E+02
Stage 4. End-of-life	C1 - C4	3.45E+00	1.81E+00
Total	Life Cycle	4.41E+02	3.17E+02

Use of Renewable Material Resources (kg)			
Market Life		Maximum Value	Average Value
Stage 1. Product	A1-A3	2.03E+00	1.38E+00
Stage 2. Desing & Construction	A4	1.18E+01	6.38E+00
Stage 3. Use & Maintenance	A5 - B7	1.93E+02	1.40E+02
Stage 4. End-of-life	C1 - C4	1.72E+00	9.05E-01
Total	Life Cycle	2.08E+02	1.48E+02

Use of Renewable Primary Energy (MJ)			
Design Life		Maximum Value	Average Value
Stage 1. Product	A1-A3	0.00E+00	0.00E+00
Stage 2. Desing & Construction	A4	0.00E+00	0.00E+00
Stage 3. Use & Maintenance	A5 - B7	0.00E+00	0.00E+00
Stage 4. End-of-life	C1 - C4	0.00E+00	0.00E+00
Total	Life Cycle	0.00E+00	0.00E+00

Use of Renewable Primary Energy (MJ)			
Market Life		Maximum Value	Average Value
Stage 1. Product	A1-A3	0.00E+00	0.00E+00
Stage 2. Desing & Construction	A4	0.00E+00	0.00E+00
Stage 3. Use & Maintenance	A5 - B7	0.00E+00	0.00E+00
Stage 4. End-of-life	C1 - C4	0.00E+00	0.00E+00
Total	Life Cycle	0.00E+00	0.00E+00

Consumption of Freshwater (m3)			
Design Life		Maximum Value	Average Value
Stage 1. Product	A1-A3	2.96E-02	2.07E-02
Stage 2. Desing & Construction	A4	4.17E-04	2.25E-04
Stage 3. Use & Maintenance	A5 - B7	3.26E-01	2.28E-01
Stage 4. End-of-life	C1 - C4	-3.51E-03	-1.05E-02
Total	Life Cycle	3.37E-01	2.38E-01

Consumption of Freshwater (m3)			
Design Life		Maximum Value	Average Value
Stage 1. Product	A1-A3	2.96E-02	2.07E-02
Stage 2. Desing & Construction	A4	4.17E-04	2.25E-04
Stage 3. Use & Maintenance	A5 - B7	1.48E-01	1.04E-01
Stage 4. End-of-life	C1 - C4	-1.76E-03	-5.24E-03
Total	Life Cycle	1.69E-01	1.19E-01

Hazardous waste (kg)			
Design Life		Maximum Value	Average Value
Stage 1. Product	A1-A3	1.88E-04	1.20E-04
Stage 2. Desing & Construction	A4	7.65E-05	4.13E-05
Stage 3. Use & Maintenance	A5 - B7	2.06E-03	1.32E-03
Stage 4. End-of-life	C1 - C4	2.25E-05	1.18E-05
Total	Life Cycle	2.35E-03	1.49E-03

Hazardous waste (kg)			
Market Life		Maximum Value	Average Value
Stage 1. Product	A1-A3	1.88E-04	1.20E-04
Stage 2. Desing & Construction	A4	7.65E-05	4.13E-05
Stage 3. Use & Maintenance	A5 - B7	9.38E-04	5.99E-04
Stage 4. End-of-life	C1 - C4	1.12E-05	5.91E-06
Total	Life Cycle	1.21E-03	7.67E-04

Hydro/wind power (MJ)			
Design Life		Maximum Value	Average Value
Stage 1. Product	A1-A3	1.65E+00	1.00E+00
Stage 2. Desing & Construction	A4	1.63E-02	8.81E-03
Stage 3. Use & Maintenance	A5 - B7	1.82E+01	1.10E+01
Stage 4. End-of-life	C1 - C4	1.55E-02	8.38E-03
Total	Life Cycle	1.99E+01	1.21E+01

Hydro/wind power (MJ)			
Market Life		Maximum Value	Average Value
Stage 1. Product	A1-A3	1.65E+00	1.00E+00
Stage 2. Desing & Construction	A4	1.63E-02	8.81E-03
Stage 3. Use & Maintenance	A5 - B7	8.27E+00	5.02E+00
Stage 4. End-of-life	C1 - C4	7.73E-03	4.19E-03
Total	Life Cycle	9.95E+00	6.04E+00

Fossil energy (MJ)			
Design Life		Maximum Value	Average Value
Stage 1. Product	A1-A3	3.74E+01	2.69E+01
Stage 2. Desing & Construction	A4	1.18E+01	6.37E+00
Stage 3. Use & Maintenance	A5 - B7	4.12E+02	2.96E+02
Stage 4. End-of-life	C1 - C4	3.43E+00	1.80E+00
Total	Life Cycle	4.64E+02	3.31E+02

Fossil energy (MJ)			
Market Life		Maximum Value	Average Value
Stage 1. Product	A1-A3	3.74E+01	2.69E+01
Stage 2. Desing & Construction	A4	1.18E+01	6.37E+00
Stage 3. Use & Maintenance	A5 - B7	1.87E+02	1.34E+02
Stage 4. End-of-life	C1 - C4	1.71E+00	9.00E-01
Total	Life Cycle	2.38E+02	1.69E+02

Bio-energy (MJ)			
Design Life		Maximum Value	Average Value
Stage 1. Product	A1-A3	4.88E-01	3.82E-01
Stage 2. Desing & Construction	A4	1.79E-03	9.64E-04
Stage 3. Use & Maintenance	A5 - B7	5.36E+00	4.21E+00
Stage 4. End-of-life	C1 - C4	5.94E-03	3.19E-03
Total	Life Cycle	5.85E+00	4.59E+00

Bio-energy (MJ)			
Market Life		Maximum Value	Average Value
Stage 1. Product	A1-A3	4.88E-01	3.82E-01
Stage 2. Desing & Construction	A4	1.79E-03	9.64E-04
Stage 3. Use & Maintenance	A5 - B7	2.44E+00	1.91E+00
Stage 4. End-of-life	C1 - C4	2.97E-03	1.59E-03
Total	Life Cycle	2.93E+00	2.30E+00

Nuclear- energy (MJ)			
Design Life		Maximum Value	Average Value
Stage 1. Product	A1-A3	1.12E+00	1.08E+00
Stage 2. Desing & Construction	A4	2.33E-02	1.26E-02
Stage 3. Use & Maintenance	A5 - B7	1.23E+01	1.18E+01
Stage 4. End-of-life	C1 - C4	1.87E-02	1.02E-02
Total	Life Cycle	1.34E+01	1.29E+01

Nuclear- energy (MJ)			
Market Life		Maximum Value	Average Value
Stage 1. Product	A1-A3	1.12E+00	1.08E+00
Stage 2. Desing & Construction	A4	2.33E-02	1.26E-02
Stage 3. Use & Maintenance	A5 - B7	5.58E+00	5.38E+00
Stage 4. End-of-life	C1 - C4	9.35E-03	5.11E-03
Total	Life Cycle	6.73E+00	6.48E+00

Other-energy (MJ)			
Design Life		Maximum Value	Average Value
Stage 1. Product	A1-A3	0.00E+00	0.00E+00
Stage 2. Desing & Construction	A4	0.00E+00	0.00E+00
Stage 3. Use & Maintenance	A5 - B7	0.00E+00	0.00E+00
Stage 4. End-of-life	C1 - C4	0.00E+00	0.00E+00
Total	Life Cycle	0.00E+00	0.00E+00

Other-energy (MJ)			
Market Life		Maximum Value	Average Value
Stage 1. Product	A1-A3	0.00E+00	0.00E+00
Stage 2. Desing & Construction	A4	0.00E+00	0.00E+00
Stage 3. Use & Maintenance	A5 - B7	0.00E+00	0.00E+00
Stage 4. End-of-life	C1 - C4	0.00E+00	0.00E+00
Total	Life Cycle	0.00E+00	0.00E+00

Secondary fuels (MJ)			
Design Life		Maximum Value	Average Value
Stage 1. Product	A1-A3	0.00E+00	0.00E+00
Stage 2. Desing & Construction	A4	0.00E+00	0.00E+00
Stage 3. Use & Maintenance	A5 - B7	0.00E+00	0.00E+00
Stage 4. End-of-life	C1 - C4	0.00E+00	0.00E+00
Total	Life Cycle	0.00E+00	0.00E+00

Secondary fuels (MJ)			
Market Life		Maximum Value	Average Value
Stage 1. Product	A1-A3	0.00E+00	0.00E+00
Stage 2. Desing & Construction	A4	0.00E+00	0.00E+00
Stage 3. Use & Maintenance	A5 - B7	0.00E+00	0.00E+00
Stage 4. End-of-life	C1 - C4	0.00E+00	0.00E+00
Total	Life Cycle	0.00E+00	0.00E+00

Recycled materials (kg)			
Design Life		Maximum Value	Average Value
Stage 1. Product	A1-A3	1.42E-03	8.38E-04
Stage 2. Desing & Construction	A4	0.00E+00	0.00E+00
Stage 3. Use & Maintenance	A5 - B7	0.00E+00	0.00E+00
Stage 4. End-of-life	C1 - C4	4.09E-02	3.47E-02
Total	Life Cycle	4.13E-02	3.55E-02

Water (m3)			
Design Life		Maximum Value	Average Value
Stage 1. Product	A1-A3	2.96E-02	2.07E-02
Stage 2. Desing & Construction	A4	4.17E-04	2.25E-04
Stage 3. Use & Maintenance	A5 - B7	3.26E-01	2.28E-01
Stage 4. End-of-life	C1 - C4	-3.51E-03	-1.05E-02
Total	Life Cycle	3.37E-01	2.38E-01

Recycled materials (kg)			
Market Life		Maximum Value	Average Value
Stage 1. Product	A1-A3	1.42E-03	8.38E-04
Stage 2. Desing & Construction	A4	0.00E+00	0.00E+00
Stage 3. Use & Maintenance	A5 - B7	0.00E+00	0.00E+00
Stage 4. End-of-life	C1 - C4	2.05E-02	1.73E-02
Total	Life Cycle	2.08E-02	1.82E-02

Water (m3)			
Market Life		Maximum Value	Average Value
Stage 1. Product	A1-A3	2.96E-02	2.07E-02
Stage 2. Desing & Construction	A4	4.17E-04	2.25E-04
Stage 3. Use & Maintenance	A5 - B7	1.48E-01	1.04E-01
Stage 4. End-of-life	C1 - C4	-1.76E-03	-5.24E-03
Total	Life Cycle	1.69E-01	1.19E-01

Interpretation

As shown in the life cycle assessment results, the stage with the highest contribution is the use and maintenance phase (A5–B7), mainly driven by repainting and maintenance activities required throughout the building's service life. The product stage (A1–A3) ranks second, reflecting the impacts of raw material extraction, formulation, and manufacturing of the coating.

The stages with the lowest relative contribution are design and construction (A4), which accounts for transportation of the product from the plant to the application site, and the end-of-life stage (C1–C4), where impacts are limited to the treatment and disposal of the residual dry film.

Additional environmental information

Pintuco S.A.S. has consolidated a proactive environmental approach, consistent with global and national commitments on climate change. As part of this vision, the company is among the 100 organizations that are part of the **National Carbon Neutrality Program**, led by the Colombian Ministry of Environment and Sustainable Development. Through this membership, Pintuco contributes to the national goal of reducing greenhouse gas (GHG) emissions by 51% by 2030 and achieving **carbon neutrality by 2050**.

In alignment with the voluntary agreements signed with the environmental authority CORNARE, Pintuco S.A.S. monitors its CO_2eq emissions at the Rionegro plant using the MRV tool (Monitoring, Reporting, and Verification System for Climate Change Adaptation and Mitigation Actions). In addition, carbon offsetting actions are carried out, and measures are implemented

to help reduce the total tons of CO_2eq emitted. For the comparative analysis, the year 2021 was selected as theline, in accordance with the criteria established by the ISO 14064-1 standard.

Beyond emissions quantification, Pintuco S.A.S. has implemented various actions to reduce CO_2eq emissions, including: the use of renewable electricity in its facilities, installation of energy-efficient lighting, procurement of a state-of-the-art compressed air supply system, fleet renewal, automation of processes aimed at improving efficiency and reducing energy consumption, and the implementation of an integrated energy management system.

Among the actions taken by Pintuco to reduce its carbon footprint are the following:

- Installation of a **1,7 MWp interconnected photovoltaic system** at its plant in Rionegro, Antioquia, consisting of 5.614 solar panels and 22 inverters, which provide a significant portion of the electrical energy used in production.
- Replacement of lighting fixtures and devices with **high-efficiency LED** technology.
- Implementation of a **state-of-the-art compressed air system** with lower energy consumption.
- Replacement of traditional motors with **high-efficiency electric motors**.
- Renewal of the **vehicle fleet**, with criteria of efficiency and emission reduction.
- Industrial **automation processes** focused on optimizing energy consumption.
- Strengthening **energy management** through consumption monitoring and control.

These initiatives not only improve the organization's environmental performance but also contribute to the energy transition and sustainable competitiveness of the paint and coatings sector in Colombia and Latin America.

Conversion factors

The following conversion factors allow you to translate environmental results expressed per square meter of product (m^2) into units that are more representative for the end user, such as gallons or kilogram applied to your project.

These factors allow you to estimate the total environmental impact according to the amount actually used or purchased. To calculate it, simply multiply the environmental impact value per square meter (obtained from the results tables) by:

- The total amount of product purchased, and
- The corresponding conversion factor as applicable.

This will facilitate understanding of the results and their integration into decision-making processes or sustainability analyses for your project.

Product	Min. Yield (m^2/gal) @2 coats	Min. Consumption (kg/m^2) @2 coats	Average Density (kg/gal)	Conversion Factor to Gal (m^2/Gal)	Conversion Factor to kg (m^2/kg)
Koraza Pro 550	8.00	0.64	5.14	8.00	1.56

Product	Min. Yield (m^2/kg)	Min. Consumption (kg/m^2)	Average Density (kg/gal)	Conversion Factor to Gal (m^2/Gal)	Conversion Factor to kg (m^2/kg)
Graniplast Premium Esgrafiado	0.27	3.75	7.83	0.27	0.27

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