



ENVIRONMENTAL PRODUCT DECLARATION

In accordance with ISO 14025 and EN 15804:2012+A2:2019 for:

Enamels

From

Pinturas Macy S.A.

Autovía A-31, Salida 41, 02630 La Roda (Albacete)

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General information

Programme information

Programme:	The International EPD® System
Address:	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
Website:	www.environdec.com
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CEN standard EN 15804 serves as the Core Product Category Rules (PCR)

Product category rules (PCR): Product category rules (PCR): PCR 2019:14 Construction Products. Version 1.11

PCR review was conducted by: The Technical Committee of the International EPD® System.
See www.environdec.com/TC for a list of members.
Review chair: Claudia A. Peña. The review panel may be contacted via the Secretariat info@environdec.com

Independent third-party verification of the declaration and data, according to ISO 14025:2006:

☐ EPD process certification ☒ EPD verification

Third party verifier:

TECNALIA R&I SL Certification Auditor: Eva Larzabal Aperribay
Accredited by: ENAC. Accreditation no.125/C-PR283

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

☒ Yes ☐ No

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

EPDs within the same product category but from different programmes may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804. For further information about comparability, see EN 15804 and ISO 14025.

Company information

Owner of the EPD: Pinturas Macy S.A
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Description of the organization:

Pinturas Macy is a company specialized in the manufacture of paints of the highest quality, which was established in 1978. We have been combining passion, effort, commitment and a constant search for excellence for more than 40 years. Factors that make us a solid benchmark company in the paint sector.

A family business, led by the second generation, with the DNA and means of a multinational company. Our marked family character allows us to offer our clients a close and personalized treatment, adapting and satisfying their needs with total flexibility.

We combine tradition and avant-garde. We have the most advanced technology in the paint sector to create innovative solutions, according to market trends and with a philosophy based on sustainability.

During these years, Pinturas Macy has been able to adapt to a constantly evolving market, which has allowed us to be who we are and to be present in Europe, Africa and South America, following an internationalization process in which we continue to work.

Facilities

The current facilities of **Pinturas Macy** are located on an area of 120,000 square meters, which include the departments of production, logistics and a total of **three laboratories, administration, training center and showroom**.

We have three well-differentiated laboratories: Tintometry, water-based products and solvent-based products.

We produce an average of 250 tons of finished product daily.

We have our own logistics platform, made up of a large fleet of trucks and agreements with the leading national and international transport companies. Thus, we guarantee a correct flow of goods that allows us to supply all our products without incident.

We always guarantee a **real stock** of all the references that make up our product catalog.

Environmental responsibility

As a chemical industry, our activity is not exempt from environmental risks, so it is a priority for **Pinturas Macy** to continuously minimize the impact of our processes on the natural environment.

- We integrate sustainable development criteria in all areas of activity of the company.
- We make a rational use of natural resources, raw materials and energy.
- We manage the minimization of waste.
- We guarantee compliance with European regulations and Spanish legislation in all of our products and in our production processes.
- We have a water treatment plant.

Periodically, we carry out audits of the implemented quality and management system.

We guarantee that our production and logistics processes have all the necessary measures to avoid any risk of contamination.

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Pinturas Macy is certified with the UNE-EN ISO 9001: 2015 and UNE-EN ISO 14001 environmental management standards. Our goal is to limit VOC emissions in order to prevent and reduce air pollution.

I+D+i

Pinturas Macy maintains a strong commitment to research, development and innovation as the engine of our present and future strategy.

Since our inception, we have followed a model of permanent research and innovation, which has allowed us to position ourselves as a benchmark in the painting sector, both nationally and internationally.

We have a human team dedicated exclusively to researching innovative solutions. An added value to offer our customers products of the highest quality at a competitive cost.

Our I+D+i strategy is based on compliance with the following basic principles:

- Involvement of all company departments in the culture of innovation, promoting the incorporation of the latest technological advances in production processes and in all the activities we carry out.
- Constant modernization of equipment and technical production systems.
- Continuous improvement of human resources training.
- Maintenance and review of the Management System implemented, based on the **UNE-EN ISO 9001:2015, UNE-EN ISO 14001:2015** and **UNE 166002:2014**.

Thanks to our work, the Ministry of Science, Innovation and Universities has recognized **Pinturas Macy** as an **Innovative PYME**. A certification that certifies the effort made by the company in I+D+i in recent years.

Name and location of production site: PINTURAS MACY S.A.
Autovía A-31, Salida 41
02630 La Roda (Albacete)
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Product description

Product name:

This EPD covers all the product's references included within the Enamels family.

- GROUP 1: ESMALTE AZULEJOS
- GROUP 2: ESMALTE AL AGUA MULTISUPERFICIES ECOLÓGICO, ESMALTE LACA MACYLAK, AGUA EPOX LÍNEA INDUSTRIAL, AGUA EPOX LÍNEA INDUSTRIAL HYGIENIC, ESMALTE SINTÉTICO INSTAN COLOR
- GROUP 3: ESMALTE SINTÉTICO MACY
- GROUP 4: OXIRMAC PAVONADO
- GROUP 5: OXIRMAC FORJA, ESMALTE POLIURETANO ETERNO, ESMALTE CLOROCAUCHO
- GROUP 6: OXIRMAC LISO, MACYTHANE HS 2009 M
- GROUP 7: MACY EPOX, MACYDUR PRIMER 2054 M

Product identification:

Macy Paints is a solid manufacturer and distributor in the market of decorative paints both indoors and outdoors, which tries to improve people's lives through painting and colour.

We are very aware of the demands of the market, that is why all the enamel products manufactured, offer professional painters high performance and an excellent combination of quality and product performance; they are also characterized by their great hardness and resistance and their extraordinary leveling.

In this family we find a wide range of benefits that govern our products and that will surely be to the liking of our customers based on their particular needs. We can find antioxidant products, passable, resistant to abrasion, waterproof, with corrosion inhibiting pigments derived from zinc and a long etc.

Finding such a variety of properties in the Macy Paints enamels line, we can use them for an immensity of applications both in the industry of various sectors and in decoration.

Product description:

This report covers all the stated MACY PAINT Enamels ranges listed. The following is a brief description of the **Esmalte al Agua Multisuperficies Ecológico**, as well as its main characteristics:



Esmalte al Agua Multisuperficies Ecológico with polyurethane, is an ecological product based on acrylic resins and practically without odor. It has excellent application and levelling properties and does not yellow.



Graphene has been incorporated into its formula, providing unparalleled hardness, strength and flexibility properties. This way we get a product to apply on wood and other surfaces with great resistance to weathering. In addition, the good technical properties of the product give it multisurface properties, to apply directly without the need for primer on different types of support.

The product, available in three different finishes, gloss, matte and satin, can be purchased in white, black and to make any colour in the MACY Instan-Color Tintometric System.

Esmalte al Agua Multisuperficies Ecológico Glowor Satin is perfect for outdoors, while the Matte is designed to obtain smooth walls, super resistant to stains and friction.

It is recommended for use in concrete, precast concrete, fiber cement, wood, galvanized steel, light alloys and other supports previously sanitized and primed in furniture, windows, blinds, plasterboards, walls, railings, laying in buildings and public or private premises, homes, etc.

Below is a table with the main technical characteristics of the reference:

Parameter	Value
Density	1,050 - 1,340 kg/L (UNE EN ISO 2811), depending on color
Performance	8 - 12 m ² /L and coat (depending on finish)
Nature	Acrylic
Finishing	Gloss, Satin and Matte
Viscosity	100 - 110 KU (UNE 48076)
Washability	Class 1 (EN 13300)
Thinner	Water
Dilution	0 - 15%, according to application method
Drying time	20 - 30 minutes at 20 °C and 60% relative humidity
Repainting time	6 - 8 hours at 20 °C and 60% relative humidity
Flash point	Not flammable
VOCs content (according to 2004/42/CE)	1,9 g/L (máximum 30 g/L, theoretical content)
Painting methods	Brush, roller or spray guns

More information: <http://www.pinturas-macy.com/productos.php>

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Description of the production process:

The production process begins with the reception of the materials, coming from the different suppliers that arrive both on pallets and in containers. These are unloaded in the facilities in a first initial phase, since in a second phase a quality control of them is carried out. Once the quality stage of raw materials has been passed, they are stored for later use in manufacturing.

With the internal need to supply our references to customers, the production process begins, which may consist of proceeding to manufacture a given product using raw materials in different stages of dispersion and mixing. While the paint rests, quality control is carried out in the laboratory to verify that everything is correct. Once the laboratory control passes positively, the finished product is ready to be packaged in plastic bottles and stored on pallets for later distribution to the market. For this entire production process, water extracted from its own well and electricity have been needed, as well as gas for the operation of transport machines.

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

LCA information

Functional unit: kg of product to paint one m² of wall, ranging from, from 0,232 kg/m² to 0,700 kg/m² depending on the paint reference. Specifically, Esmalte al Agua Multisuperficies Ecológico is 0,364 kg/m².

Reference service life: 10 years.

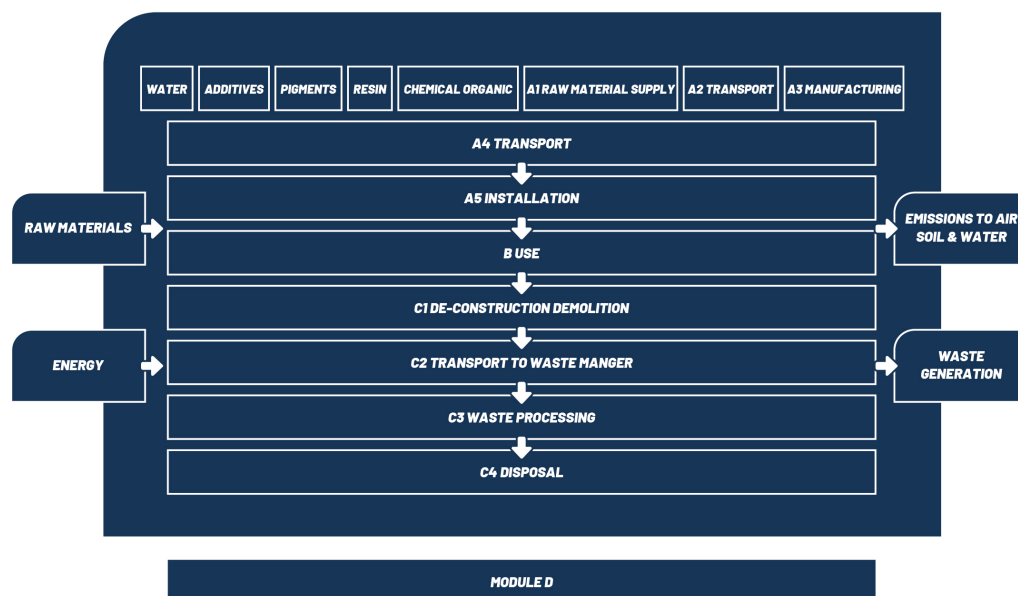
Time representativeness: data from factory (primary data) is from 2019. The products are manufactured in the manufacturing plants in Spain. The amount used of raw materials as well as energy consumption, waste production, pollutant emissions and transport distance (in A2 and A4) have been obtained from the manufacturing plants (primary data). Primary data has been obtained through a production of product over the total production of the company in Spain in 2019.

Database(s) and LCA software used: generic data on the impact per unit of matter or energy have been taken to determine emissions per kg of matter, kWh of energy or km transported. These data have been obtained from the Ecoinvent database version 3.6. (Updated in 6 month) and Simapro 9.3.0.3. The impact models used are those indicated in UNE-EN 15804:2012+A2:2019.

Description of system boundaries:

From cradle to grave or "Cradle to grave and module D". The EPD covers modules A1-A3, A4-A5, B1-B7, C1 – C4 and D.

System diagram:



More information: www.pinturas-macy.com

- Technical support for the implementation of the EPD: Marcel Gómez Consultoría Ambiental.
- The modularity principle, as well as the polluter-payer principle have been followed.
- Cut off rules: According to UNE-EN 15804 a minimum of 95% of total inflows (mass and energy) per module are included and more than 99% of the inflows are accounted for.
- Diesel consumption of internal factory forklifts has been excluded as it is less than 1% of the total and 5% per module.
- Allocation procedure: where necessary (energy, waste generation) an allocation based in mass has been used.
- The scenarios included are currently in use and are representative for one of the most probable alternatives.
- The quality of the input data has been evaluated according to its technological, temporal and geographical coverage. The representativeness of the selected processes is considered to be good, resulting in a value of 4,022 out of 5.
- The next processes have not been included since its impact is not significant:
 - Environmental impact from infrastructure, construction, production equipment, and tools that are not directly consumed in the production process.
 - Personnel-related impacts, such as transportation to and from work.
 - Long term emissions.

Modules declared, geographical scope, share of specific data (in GWP-GHG indicator) and data variation:

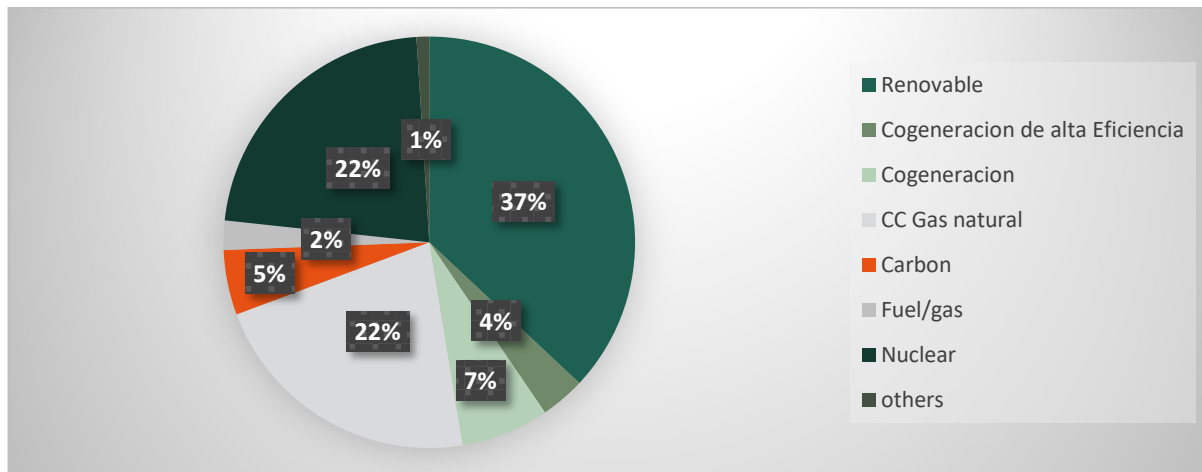
Module	Product stage			Construction process stage		Use stage							End of life stage				Resource recovery stage
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
	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	ES	ES	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO
Specific data used	More than 99% specific data is used in the EPD.					-	-	-	-	-	-	-	-	-	-	-	-
Variation - products	> 10% GWP*					-	-	-	-	-	-	-	-	-	-	-	-
Variation - sites	One production site					-	-	-	-	-	-	-	-	-	-	-	-

*Inside the family, there are references with a difference larger than a 10% in terms of environmental impact. The results presented on this EPD are groupings of references which have a lesser difference than a 10%, being representative the results for the references within these groups.

■ A1-A3 Product stage

- **A1 Raw materials supply:** this module takes into account the extraction and processing of raw materials and the production of energy which is consumed at the manufacturing plant.
- **A2 Transport:** this module includes the transport of the different raw materials from the manufacturer to the factory.
- **A3 Manufacturing:** this module includes the consumption of energy during the manufacturing process and production of packaging material used for the further distribution. Moreover transport and management of the factory-produced waste are considered.

The electricity mix used corresponds to the Iberdrola Clientes mix for the year 2019. The emissions associated with the production of electricity are 0,231 kg of CO₂/kWh.



▪ A4-A5 Construction process stage

○ A4 Transport

Transport of the product, from the production plant to the installation site. An average distance of 374,15 km by road has been considered.

PARAMETER	VALUE/DESCRIPTION
Fuel type and consumption of vehicle or vehicle type used for transport e.g. long distance truck, boat, etc	Truck of 16 - 32 tn. Fuel consumption: 25 L/100 Km
Distance	Truck: 374,15 km Ship: 0 km
Capacity utilisation (including empty returns)	100%
Bulk density of transported products*	1,050 – 1,340 kg/L (Esmalte al Agua Multisuperficies Ecológico)
Volume capacity utilisation factor	1

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○ **A5 Construction/Installation**

The product is directly transferred from the truck to the installation site, where manual operations are performed to install the analyzed product.

PARAMETER	VALUE / DESCRIPTION	
Auxiliary materials for installation	Brush or roller	Spray gun
Use of thinner	0 - 15 ml	0 - 15 ml
Use of other resources	No other resource consumption.	
Quantitative description of the type of energy (regional mix) and the consumption during the installation process	Not used.	0,015 - 0,029 kWh
Wastage of materials on the building site before waste processing, generated by the product's installation (specified by type)	Product losses (2%)	
Direct emissions to air, water and soil	None	
Outgoing materials (specified by type and treatment)	Product losses are 100% landfilled while packaging materials are 100% sent to a waste manager for their recycling.	

- **B Use stage:** Use phase (B1), and require maintenance (B2), repair (B3), replacement (B4), refurbishment (B5), operational energy use (B6) or operational water use (B7) during its Reference Service Life.
- **C End of life stage**
 - **C1 Deconstruction/demolition:** The product is dismantled and landfilled. It's assumed to be dismantled alongside the building or the surface, thus its considered negligible.
 - **C2 Transport to waste processing:** the model use for the transportation (see A4, transportation to the building site) is applied with a distance of 50 km.
 - **C3 Waste processing for reuse, recovery and/or recycling:** the product is 0% recycled.
 - **C4 Disposal:** The product is 100% landfilled.

PARAMETER	VALUE/DESCRIPTION
C1 Deconstruction/Collection process specified by type	100% Landfilled
C2 Transport Assumptions for scenario development	16 - 32 tn truck. Fuel consumption: 25 l/100 Km Distance: 50 km
C3 Waste processing Recovery system specified by type, Recovery system specified by type	REUSE - 0 kg RECYCLE - 0kg ENERGY RECOVERY - 0 kg
C4 Disposal Characteristic performance, Disposal specified by type	0,232 kg/m ² – 0,700 kg/m ² sent to landfill

▪ D Resource recovery stage

Although module D has been calculated, there are no recycling benefits since all the product is disposed of in a landfill as a mixture of construction products. 100% of the weight is sent to landfill.

Content information

This EPD® covers all the MACY Enamels ranges listed.

Product component	Weight, Kg	Post-Consumer weight %	Renewable material, weight-%
Water	0 – 0,16	0	0
Pigment - Barita	0 – 0,32	0	0
Polyamida	0 – 0,32	0	0
Epoxy resin	0 – 0,17	0	0
Others	0 - 017	0	0
Total	1	0	0
Packaging materials	Weight/kg	Weight-% (versus the product) for 1 kg	
Packaging film	0,0008	0,08%	0
Polypropylene	0,0350	3,50%	0
Pallet	0,0020	0,20%	0
TOTAL	0,0378	3,70%	0

During the life cycle of the product any hazardous substance listed in the "Candidate List of Substances of Very High Concern (SVHC) for authorization" has not been used in a percentage higher than 0,1% of the weight of the product.

Environmental Information

The following environmental impact results are grouped considering the references that have a difference lesser than a 10% in terms of environmental impact over the life cycle for GWP. The results presented for each group of products correspond specifically to the average value of each group. The highlighted reference in the group title represents the mean value results for each group.

LCIA results are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins or risk.

GROUP 1: ESMALTE AZULEJOS

Potential environmental impact – mandatory indicators according to EN 15804

Indicator	Unit	Results per Functional Unit														
		Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-fossil	kg CO ₂ eq.	7,42E-01	8,18E-03	4,35E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,05E-03	0,00E+00	1,32E-03	0,00E+00
GWP-biogenic	kg CO ₂ eq.	2,16E-03	3,13E-06	1,11E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,57E-07	0,00E+00	7,73E-07	0,00E+00
GWP-luluc	kg CO ₂ eq.	1,19E-02	2,49E-06	6,00E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,30E-07	0,00E+00	3,68E-07	0,00E+00
GWP-total	kg CO ₂ eq.	7,56E-01	8,19E-03	4,42E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,05E-03	0,00E+00	1,32E-03	0,00E+00
ODP	kg CFC 11 eq.	4,88E-08	2,01E-09	3,90E-10	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,66E-10	0,00E+00	5,44E-10	0,00E+00
AP	mol H+ eq.	7,27E-03	2,63E-05	3,86E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,89E-06	0,00E+00	1,25E-05	0,00E+00
EP-freshwater	kg PO ₄₃₋ eq.	3,80E-04	2,87E-06	2,13E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,15E-07	0,00E+00	1,67E-06	0,00E+00
EP-freshwater	kg P eq.	2,65E-05	6,51E-08	1,39E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,64E-08	0,00E+00	1,48E-08	0,00E+00
EP-marine	kg N eq.	7,16E-04	5,77E-06	4,05E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,17E-06	0,00E+00	4,32E-06	0,00E+00
EP-terrestrial	mol N eq.	7,16E-03	6,43E-05	4,10E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,30E-05	0,00E+00	4,76E-05	0,00E+00
POCP	kg NMVOC eq.	2,59E-03	2,53E-05	1,49E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,99E-06	0,00E+00	1,38E-05	0,00E+00
ADP-minerals&metals*	kg Sb eq.	1,27E-05	1,46E-07	7,84E-08	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,66E-08	0,00E+00	1,21E-08	0,00E+00
ADP-fossil*	MJ	1,27E+01	1,33E-01	7,37E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,10E-02	0,00E+00	3,70E-02	0,00E+00
WDP*	m ³	4,75E-01	4,31E-04	2,74E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,77E-05	0,00E+00	1,66E-03	0,00E+00
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption															

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

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Potential environmental impact – additional mandatory and voluntary indicators

Indicator	Unit	Results per Functional Unit														
		Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG1	kg CO ₂ eq.	7,35E-01	8,12E-03	4,30E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,03E-03	0,00E+00	1,30E-03	0,00E+00

Additional voluntary indicators e.g. the voluntary indicators from EN 15804 or the global indicators according to ISO 21930:2017

*Other optional environmental impact categories are presented on LCA report

Use of resources

Indicator	Unit	Results per Functional Unit														
		Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	9,55E-01	1,67E-03	4,91E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,44E-04	0,00E+00	2,99E-04	0,00E+00
PERM	MJ	4,46E-02	0,00E+00	8,92E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	9,99E-01	1,67E-03	5,80E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,44E-04	0,00E+00	2,99E-04	0,00E+00
PENRE	MJ	1,36E+01	1,41E-01	7,88E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,29E-02	0,00E+00	3,93E-02	0,00E+00
PENRM	MJ	4,33E-01	0,00E+00	8,65E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

1 The indicator includes all greenhouse gases included in GWP-total but excludes biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. This indicator is thus equal to the GWP indicator originally defined in EN 15804:2012+A1:2013.

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PENRT	MJ	1,41E+01	1,41E-01	8,75E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,29E-02	0,00E+00	3,93E-02	0,00E+00
SM	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	m ³	1,24E-02	1,51E-05	7,09E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,32E-06	0,00E+00	3,95E-05	0,00E+00
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water																

*LCIA results are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins or risks Waste production and output flows

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Waste production

Results per Functional Unit																
Indicator	Unit	Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste disposed	kg	2,71E-01	1,15E-02	6,92E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,51E-03	0,00E+00	2,51E-01	0,00E+00
Non-hazardous waste disposed	kg	1,08E-05	3,22E-07	7,88E-08	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,12E-08	0,00E+00	5,52E-08	0,00E+00
Radioactive waste disposed	kg	2,49E-05	9,07E-07	1,90E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,11E-07	0,00E+00	2,43E-07	0,00E+00

Other output flows

Results per Functional Unit																
Indicator	Unit	Tot.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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Information on biogenic carbon content

Results per Functional Unit		
BIOGENIC CARBON CONTENT	Unit	QUANTITY
Biogenic carbon content in product	kg C	0,00E+00
Biogenic carbon content in packaging	kg C	4,09E-03

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO₂

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GROUP 2: ESMALTE AL AGUA MULTISUPERFICIES ECOLÓGICO, ESMALTE LACA MACYLAK, AGUA EPOX LINEA INDUSTRIAL, AGUA EPOX LINEA INDUSTRIAL HYGIENIC, ESMALTE SINTÉTICO INSTAN COLOR

Potential environmental impact – mandatory indicators according to EN 15804

Indicator	Unit	Results per Functional Unit														
		Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-fossil	kg CO ₂ eq.	8,41E-01	9,30E-03	5,33E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,33E-03	0,00E+00	1,50E-03	0,00E+00
GWP-biogenic	kg CO ₂ eq.	2,55E-03	3,56E-06	1,47E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,61E-07	0,00E+00	8,78E-07	0,00E+00
GWP-luluc	kg CO ₂ eq.	3,09E-01	2,83E-06	1,76E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,29E-07	0,00E+00	4,19E-07	0,00E+00
GWP-total	kg CO ₂ eq.	1,15E+00	9,30E-03	7,11E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,33E-03	0,00E+00	1,50E-03	0,00E+00
ODP	kg CFC 11 eq.	7,05E-08	2,28E-09	5,29E-10	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,30E-10	0,00E+00	6,19E-10	0,00E+00
AP	mol H+ eq.	8,96E-03	2,99E-05	5,29E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,69E-06	0,00E+00	1,43E-05	0,00E+00
EP-freshwater	kg PO ₄₃ - eq.	1,19E-03	3,26E-06	6,97E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,99E-07	0,00E+00	1,90E-06	0,00E+00
EP-freshwater	kg P eq.	6,10E-05	7,40E-08	3,53E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,86E-08	0,00E+00	1,68E-08	0,00E+00
EP-marine	kg N eq.	2,13E-03	6,56E-06	1,26E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,33E-06	0,00E+00	4,91E-06	0,00E+00
EP-terrestrial	mol N eq.	1,11E-02	7,31E-05	6,82E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,48E-05	0,00E+00	5,41E-05	0,00E+00
POCP	kg NMVOC eq.	3,50E-03	2,87E-05	2,16E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,68E-06	0,00E+00	1,57E-05	0,00E+00
ADP-minerals&metals*	kg Sb eq.	2,18E-05	1,66E-07	1,36E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,43E-08	0,00E+00	1,38E-08	0,00E+00
ADP-fossil*	MJ	1,14E+01	1,51E-01	7,34E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,52E-02	0,00E+00	4,20E-02	0,00E+00
WDP*	m ³	7,83E-01	4,90E-04	4,53E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,97E-05	0,00E+00	1,88E-03	0,00E+00
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption															

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

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Potential environmental impact – additional mandatory and voluntary indicators

Results per Functional Unit																
Indicator	Unit	Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG2	kg CO ₂ eq.	1,12E+00	9,23E-03	6,93E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,31E-03	0,00E+00	1,48E-03	0,00E+00

Additional voluntary indicators e.g. the voluntary indicators from EN 15804 or the global indicators according to ISO 21930:2017

*Other optional environmental impact categories are presented on LCA report

Use of resources

Results per Functional Unit																
Indicator	Unit	Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	3,59E+00	1,90E-03	2,06E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,04E-04	0,00E+00	3,40E-04	0,00E+00
PERM	MJ	4,20E-02	0,00E+00	8,39E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	3,63E+00	1,90E-03	2,14E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,04E-04	0,00E+00	3,40E-04	0,00E+00
PENRE	MJ	1,26E+01	1,60E-01	8,11E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,74E-02	0,00E+00	4,46E-02	0,00E+00
PENRM	MJ	7,28E-01	0,00E+00	1,46E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

2 The indicator includes all greenhouse gases included in GWP-total but excludes biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. This indicator is thus equal to the GWP indicator originally defined in EN 15804:2012+A1:2013.

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PENRT	MJ	1,33E+01	1,60E-01	9,56E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,74E-02	0,00E+00	4,46E-02	0,00E+00
SM	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	m ³	2,02E-02	1,72E-05	1,17E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,77E-06	0,00E+00	4,49E-05	0,00E+00
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water															

*LCIA results are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins or risks Waste production and output flows

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Waste production

Results per Functional Unit																
Indicator	Unit	Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste disposed	kg	3,08E-01	1,31E-02	7,95E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,71E-03	0,00E+00	2,85E-01	0,00E+00
Non-hazardous waste disposed	kg	1,31E-05	3,66E-07	9,56E-08	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,23E-08	0,00E+00	6,28E-08	0,00E+00
Radioactive waste disposed	kg	2,79E-05	1,03E-06	2,16E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,40E-07	0,00E+00	2,76E-07	0,00E+00

Other output flows

Results per Functional Unit																
Indicator	Unit	Tot.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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Information on biogenic carbon content

Results per Functional Unit		
BIOGENIC CARBON CONTENT	Unit	QUANTITY
Biogenic carbon content in product	kg C	0,00E+00
Biogenic carbon content in packaging	kg C	3,85E-03

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO₂

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GROUP 3: ESMALTE SINTÉTICO MACY

Potential environmental impact – mandatory indicators according to EN 15804

Results per Functional Unit																
Indicator	Unit	Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-fossil	kg CO ₂ eq.	7,94E-01	9,78E-03	5,48E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,45E-03	0,00E+00	1,58E-03	0,00E+00
GWP-biogenic	kg CO ₂ eq.	3,29E-03	3,75E-06	2,00E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,05E-07	0,00E+00	9,24E-07	0,00E+00
GWP-luluc	kg CO ₂ eq.	4,34E-01	2,98E-06	2,60E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,72E-07	0,00E+00	4,40E-07	0,00E+00
GWP-total	kg CO ₂ eq.	1,23E+00	9,78E-03	8,10E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,45E-03	0,00E+00	1,58E-03	0,00E+00
ODP	kg CFC 11 eq.	7,90E-08	2,40E-09	6,42E-10	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,57E-10	0,00E+00	6,51E-10	0,00E+00
AP	mol H ⁺ eq.	1,16E-02	3,15E-05	7,18E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,04E-06	0,00E+00	1,50E-05	0,00E+00
EP-freshwater	kg PO ₄₃ - eq.	1,53E-03	3,43E-06	9,42E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,35E-07	0,00E+00	2,00E-06	0,00E+00
EP-freshwater	kg P eq.	7,57E-05	7,78E-08	4,60E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,96E-08	0,00E+00	1,77E-08	0,00E+00
EP-marine	kg N eq.	2,73E-03	6,89E-06	1,69E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,39E-06	0,00E+00	5,16E-06	0,00E+00
EP-terrestrial	mol N eq.	1,35E-02	7,69E-05	8,66E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,56E-05	0,00E+00	5,69E-05	0,00E+00
POCP	kg NMVOC eq.	3,94E-03	3,02E-05	2,58E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,97E-06	0,00E+00	1,65E-05	0,00E+00
ADP-minerals&metals*	kg Sb eq.	2,77E-05	1,74E-07	1,83E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,76E-08	0,00E+00	1,45E-08	0,00E+00
ADP-fossil*	MJ	9,61E+00	1,59E-01	6,89E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,70E-02	0,00E+00	4,42E-02	0,00E+00
WDP*	m ³	7,97E-01	5,15E-04	4,86E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,05E-04	0,00E+00	1,98E-03	0,00E+00
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption															

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

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Potential environmental impact – additional mandatory and voluntary indicators

Indicator	Unit	Results per Functional Unit														
		Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG3	kg CO ₂ eq.	1,20E+00	9,70E-03	7,91E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,43E-03	0,00E+00	1,55E-03	0,00E+00

Additional voluntary indicators e.g. the voluntary indicators from EN 15804 or the global indicators according to ISO 21930:2017

*Other optional environmental impact categories are presented on LCA report

Use of resources

Indicator	Unit	Results per Functional Unit														
		Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	4,62E+00	2,00E-03	2,79E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,30E-04	0,00E+00	3,57E-04	0,00E+00
PERM	MJ	2,08E-03	0,00E+00	4,15E-05	0,00E+00	0,00E+00	0,00E+00	6,40E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	4,63E+00	2,00E-03	2,79E-02	0,00E+00	0,00E+00	0,00E+00	6,40E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,30E-04	0,00E+00	3,57E-04	0,00E+00
PENRE	MJ	1,09E+01	1,69E-01	7,72E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,93E-02	0,00E+00	4,69E-02	0,00E+00
PENRM	MJ	4,06E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

³ The indicator includes all greenhouse gases included in GWP-total but excludes biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. This indicator is thus equal to the GWP indicator originally defined in EN 15804:2012+A1:2013.

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PENRT	MJ	1,13E+01	1,69E-01	7,72E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,93E-02	0,00E+00	4,69E-02	0,00E+00
SM	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	m ³	2,16E-02	1,81E-05	1,32E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,96E-06	0,00E+00	4,72E-05	0,00E+00
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water																

*LCIA results are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins or risks Waste production and output flows

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Waste production

Results per Functional Unit																
Indicator	Unit	Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste disposed	kg	4,39E-01	1,38E-02	9,25E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,80E-03	0,00E+00	3,00E-01	0,00E+00
Non-hazardous waste disposed	kg	1,68E-05	3,85E-07	1,29E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,70E-08	0,00E+00	6,60E-08	0,00E+00
Radioactive waste disposed	kg	3,39E-05	1,08E-06	2,78E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,52E-07	0,00E+00	2,90E-07	0,00E+00

Other output flows

Results per Functional Unit																
Indicator	Unit	Tot.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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Information on biogenic carbon content

Results per Functional Unit		
BIOGENIC CARBON CONTENT	Unit	QUANTITY
Biogenic carbon content in product	kg C	0,00E+00
Biogenic carbon content in packaging	kg C	4,11E-03

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO₂

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GROUP 4: OXIRMAC PAVONADO

Potential environmental impact – mandatory indicators according to EN 15804

Results per Functional Unit																
Indicator	Unit	Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-fossil	kg CO ₂ eq.	9,28E-01	1,88E-02	1,17E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,70E-03	0,00E+00	3,03E-03	0,00E+00
GWP-biogenic	kg CO ₂ eq.	3,60E-03	7,19E-06	4,19E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,74E-06	0,00E+00	1,77E-06	0,00E+00
GWP-luluc	kg CO ₂ eq.	4,91E-01	5,72E-06	5,66E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,67E-06	0,00E+00	8,46E-07	0,00E+00
GWP-total	kg CO ₂ eq.	1,42E+00	1,88E-02	1,74E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,71E-03	0,00E+00	3,04E-03	0,00E+00
ODP	kg CFC 11 eq.	1,09E-07	4,61E-09	1,50E-09	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,07E-09	0,00E+00	1,25E-09	0,00E+00
AP	mol H ⁺ eq.	7,57E-03	6,04E-05	9,07E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,35E-05	0,00E+00	2,88E-05	0,00E+00
EP-freshwater	kg PO ₄₃ - eq.	1,84E-03	6,59E-06	2,16E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,41E-06	0,00E+00	3,84E-06	0,00E+00
EP-freshwater	kg P eq.	7,74E-05	1,49E-07	9,00E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,76E-08	0,00E+00	3,40E-08	0,00E+00
EP-marine	kg N eq.	3,10E-03	1,32E-05	3,65E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,68E-06	0,00E+00	9,90E-06	0,00E+00
EP-terrestrial	mol N eq.	1,73E-02	1,48E-04	2,09E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,99E-05	0,00E+00	1,09E-04	0,00E+00
POCP	kg NMVOC eq.	4,18E-03	5,80E-05	5,14E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,15E-05	0,00E+00	3,17E-05	0,00E+00
ADP-minerals&metals*	kg Sb eq.	8,19E-05	3,34E-07	9,66E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,30E-07	0,00E+00	2,78E-08	0,00E+00
ADP-fossil*	MJ	1,07E+01	3,05E-01	1,40E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,11E-02	0,00E+00	8,48E-02	0,00E+00
WDP*	m ³	8,90E-01	9,90E-04	1,04E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,01E-04	0,00E+00	3,80E-03	0,00E+00
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption															

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

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Potential environmental impact – additional mandatory and voluntary indicators

Indicator	Unit	Results per Functional Unit														
		Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG4	kg CO ₂ eq.	1,38E+00	1,86E-02	1,70E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,67E-03	0,00E+00	2,98E-03	0,00E+00

Additional voluntary indicators e.g. the voluntary indicators from EN 15804 or the global indicators according to ISO 21930:2017

*Other optional environmental impact categories are presented on LCA report

Use of resources

Indicator	Unit	Results per Functional Unit														
		Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	5,00E+00	3,84E-03	5,77E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,02E-03	0,00E+00	6,86E-04	0,00E+00
PERM	MJ	2,99E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	5,03E+00	3,84E-03	5,77E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,02E-03	0,00E+00	6,86E-04	0,00E+00
PENRE	MJ	1,21E+01	3,24E-01	1,57E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,55E-02	0,00E+00	9,01E-02	0,00E+00
PENRM	MJ	2,59E-01	0,00E+00	5,18E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

4 The indicator includes all greenhouse gases included in GWP-total but excludes biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. This indicator is thus equal to the GWP indicator originally defined in EN 15804:2012+A1:2013.

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PENRT	MJ	1,24E+01	3,24E-01	1,62E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,55E-02	0,00E+00	9,01E-02	0,00E+00
SM	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	m ³	2,37E-02	3,47E-05	2,76E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,61E-06	0,00E+00	9,06E-05	0,00E+00
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water																

*LCIA results are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins or risks Waste production and output flows

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Waste production

Results per Functional Unit																
Indicator	Unit	Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste disposed	kg	2,67E-01	2,65E-02	1,55E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,46E-03	0,00E+00	5,76E-01	0,00E+00
Non-hazardous waste disposed	kg	2,56E-05	7,39E-07	3,35E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,86E-07	0,00E+00	1,27E-07	0,00E+00
Radioactive waste disposed	kg	3,79E-05	2,08E-06	5,47E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,85E-07	0,00E+00	5,57E-07	0,00E+00

Other output flows

Results per Functional Unit																
Indicator	Unit	Tot.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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Information on biogenic carbon content

Results per Functional Unit		
BIOGENIC CARBON CONTENT	Unit	QUANTITY
Biogenic carbon content in product	kg C	0,00E+00
Biogenic carbon content in packaging	kg C	2,74E-03

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO₂

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GROUP 5: OXIRMAC FORJA, ESMALTE POLIURETANO ETERNO, ESMALTE CLOROCAUCHO

Potential environmental impact – mandatory indicators according to EN 15804

Results per Functional Unit																
Indicator	Unit	Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-fossil	kg CO ₂ eq.	1,26E+00	1,49E-02	1,24E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,74E-03	0,00E+00	2,41E-03	0,00E+00
GWP-biogenic	kg CO ₂ eq.	4,01E-03	5,72E-06	3,71E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,38E-06	0,00E+00	1,41E-06	0,00E+00
GWP-luluc	kg CO ₂ eq.	5,99E-01	4,55E-06	5,49E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,33E-06	0,00E+00	6,72E-07	0,00E+00
GWP-total	kg CO ₂ eq.	1,87E+00	1,49E-02	1,80E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,74E-03	0,00E+00	2,41E-03	0,00E+00
ODP	kg CFC 11 eq.	1,40E-07	3,66E-09	1,49E-09	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,51E-10	0,00E+00	9,93E-10	0,00E+00
AP	mol H ⁺ eq.	1,22E-02	4,80E-05	1,14E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,07E-05	0,00E+00	2,29E-05	0,00E+00
EP-freshwater	kg PO ₄₃ - eq.	1,90E-03	5,24E-06	1,77E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,12E-06	0,00E+00	3,05E-06	0,00E+00
EP-freshwater	kg P eq.	1,17E-04	1,19E-07	1,08E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,99E-08	0,00E+00	2,70E-08	0,00E+00
EP-marine	kg N eq.	3,16E-03	1,05E-05	2,96E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,13E-06	0,00E+00	7,87E-06	0,00E+00
EP-terrestrial	mol N eq.	1,77E-02	1,17E-04	1,70E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,38E-05	0,00E+00	8,68E-05	0,00E+00
POCP	kg NMVOC eq.	5,51E-03	4,61E-05	5,31E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,11E-06	0,00E+00	2,52E-05	0,00E+00
ADP-minerals&metals*	kg Sb eq.	6,39E-05	2,66E-07	6,05E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,03E-07	0,00E+00	2,21E-08	0,00E+00
ADP-fossil*	MJ	1,76E+01	2,42E-01	1,75E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,66E-02	0,00E+00	6,74E-02	0,00E+00
WDP	m ³	9,18E-01	7,87E-04	8,51E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,60E-04	0,00E+00	3,02E-03	0,00E+00
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption															

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

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Potential environmental impact – additional mandatory and voluntary indicators

Results per Functional Unit																
Indicator	Unit	Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG5	kg CO ₂ eq.	1,81E+00	1,48E-02	1,75E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,71E-03	0,00E+00	2,37E-03	0,00E+00
Additional voluntary indicators e.g. the voluntary indicators from EN 15804 or the global indicators according to ISO 21930:2017																

Additional voluntary indicators e.g. the voluntary indicators from EN 15804 or the global indicators according to ISO 21930:2017

*Other optional environmental impact categories are presented on LCA report

Use of resources

Results per Functional Unit																
Indicator	Unit	Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	7,26E+00	3,05E-03	6,67E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,10E-04	0,00E+00	5,45E-04	0,00E+00
PERM	MJ	3,70E-02	0,00E+00	7,40E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	7,30E+00	3,05E-03	6,74E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,10E-04	0,00E+00	5,45E-04	0,00E+00
PENRE	MJ	1,98E+01	2,57E-01	1,96E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,00E-02	0,00E+00	7,16E-02	0,00E+00
PENRM	MJ	2,91E-01	0,00E+00	5,83E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

5 The indicator includes all greenhouse gases included in GWP-total but excludes biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. This indicator is thus equal to the GWP indicator originally defined in EN 15804:2012+A1:2013.

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PENRT	MJ	2,01E+01	2,57E-01	2,02E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,00E-02	0,00E+00	7,16E-02	0,00E+00
SM	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	m ³	2,40E-02	2,76E-05	2,23E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,05E-06	0,00E+00	7,20E-05	0,00E+00
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water																

*LCIA results are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins or risks Waste production and output flows.

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Waste production

Results per Functional Unit																
Indicator	Unit	Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste disposed	kg	3,99E-01	2,11E-02	1,36E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,75E-03	0,00E+00	4,58E-01	0,00E+00
Non-hazardous waste disposed	kg	2,50E-05	5,88E-07	2,62E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,48E-07	0,00E+00	1,01E-07	0,00E+00
Radioactive waste disposed	kg	4,59E-05	1,66E-06	5,12E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,85E-07	0,00E+00	4,43E-07	0,00E+00

Other output flows

Results per Functional Unit																
Indicator	Unit	Tot.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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Information on biogenic carbon content

Results per Functional Unit		
BIOGENIC CARBON CONTENT	Unit	QUANTITY
Biogenic carbon content in product	kg C	0,00E+00
Biogenic carbon content in packaging	kg C	3,39E-03

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO₂

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GROUP 6: OXIRMAC LISO, MACYTHANE HS 2009 M

Potential environmental impact – mandatory indicators according to EN 15804

Indicator	Unit	Results per Functional Unit														
		Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-fossil	kg CO ₂ eq.	1,35E+00	1,55E-02	1,39E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,89E-03	0,00E+00	2,51E-03	0,00E+00
GWP-biogenic	kg CO ₂ eq.	5,82E-03	5,94E-06	5,57E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,44E-06	0,00E+00	1,47E-06	0,00E+00
GWP-luluc	kg CO ₂ eq.	9,27E-01	4,73E-06	8,83E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,38E-06	0,00E+00	6,99E-07	0,00E+00
GWP-total	kg CO ₂ eq.	2,28E+00	1,55E-02	2,28E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,89E-03	0,00E+00	2,51E-03	0,00E+00
ODP	kg CFC 11 eq.	1,36E-07	3,81E-09	1,54E-09	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,84E-10	0,00E+00	1,03E-09	0,00E+00
AP	mol H ⁺ eq.	2,00E-02	4,99E-05	1,94E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,12E-05	0,00E+00	2,38E-05	0,00E+00
EP-freshwater	kg PO ₄₃ -eq.	3,05E-03	5,44E-06	2,94E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,17E-06	0,00E+00	3,17E-06	0,00E+00
EP-freshwater	kg P eq.	1,46E-04	1,23E-07	1,40E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,11E-08	0,00E+00	2,81E-08	0,00E+00
EP-marine	kg N eq.	5,43E-03	1,09E-05	5,25E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,21E-06	0,00E+00	8,18E-06	0,00E+00
EP-terrestrial	mol N eq.	2,46E-02	1,22E-04	2,43E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,47E-05	0,00E+00	9,02E-05	0,00E+00
POCP	kg NMVOC eq.	6,89E-03	4,79E-05	6,87E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,47E-06	0,00E+00	2,62E-05	0,00E+00
ADP-minerals&metals*	kg Sb eq.	5,22E-05	2,76E-07	5,21E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,07E-07	0,00E+00	2,29E-08	0,00E+00
ADP-fossil*	MJ	1,55E+01	2,52E-01	1,64E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,88E-02	0,00E+00	7,01E-02	0,00E+00
WDP*	m ³	1,40E+00	8,18E-04	1,34E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,66E-04	0,00E+00	3,14E-03	0,00E+00
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption															

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

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Potential environmental impact – additional mandatory and voluntary indicators

Indicator	Unit	Results per Functional Unit														
		Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG6	kg CO ₂ eq.	2,23E+00	1,54E-02	2,22E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,86E-03	0,00E+00	2,46E-03	0,00E+00

Additional voluntary indicators e.g. the voluntary indicators from EN 15804 or the global indicators according to ISO 21930:2017

*Other optional environmental impact categories are presented on LCA report

Use of resources

Indicator	Unit	Results per Functional Unit														
		Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	9,41E+00	3,17E-03	8,97E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,41E-04	0,00E+00	5,67E-04	0,00E+00
PERM	MJ	4,34E-02	0,00E+00	8,69E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	9,45E+00	3,17E-03	9,06E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,41E-04	0,00E+00	5,67E-04	0,00E+00
PENRE	MJ	1,78E+01	2,68E-01	1,87E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,24E-02	0,00E+00	7,44E-02	0,00E+00
PENRM	MJ	3,77E-01	0,00E+00	7,54E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

6 The indicator includes all greenhouse gases included in GWP-total but excludes biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. This indicator is thus equal to the GWP indicator originally defined in EN 15804:2012+A1:2013.

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PENRT	MJ	1,82E+01	2,68E-01	1,95E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,24E-02	0,00E+00	7,44E-02	0,00E+00
SM	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	m ³	3,82E-02	2,87E-05	3,67E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,29E-06	0,00E+00	7,48E-05	0,00E+00
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water																

*LCIA results are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins or risks Waste production and output flows

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Waste production

Results per Functional Unit																
Indicator	Unit	Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste disposed	kg	7,44E-01	2,19E-02	1,75E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,86E-03	0,00E+00	4,76E-01	0,00E+00
Non-hazardous waste disposed	kg	2,78E-05	6,11E-07	3,05E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,54E-07	0,00E+00	1,05E-07	0,00E+00
Radioactive waste disposed	kg	5,73E-05	1,72E-06	6,55E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,00E-07	0,00E+00	4,60E-07	0,00E+00

Other output flows

Results per Functional Unit																
Indicator	Unit	Tot.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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Information on biogenic carbon content

Results per Functional Unit		
BIOGENIC CARBON CONTENT	Unit	QUANTITY
Biogenic carbon content in product	kg C	0,00E+00
Biogenic carbon content in packaging	kg C	3,98E-03

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO₂

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GROUP 7: MACY EPOX, MACYDUR PRIMER 2054 M

Potential environmental impact – mandatory indicators according to EN 15804

Results per Functional Unit																
Indicator	Unit	Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-fossil	kg CO ₂ eq.	2,58E+00	2,28E-02	3,73E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,72E-03	0,00E+00	3,69E-03	0,00E+00
GWP-biogenic	kg CO ₂ eq.	5,03E-03	8,74E-06	7,08E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,11E-06	0,00E+00	2,16E-06	0,00E+00
GWP-luluc	kg CO ₂ eq.	7,41E-03	6,95E-06	1,04E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,03E-06	0,00E+00	1,03E-06	0,00E+00
GWP-total	kg CO ₂ eq.	2,60E+00	2,28E-02	3,75E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,72E-03	0,00E+00	3,69E-03	0,00E+00
ODP	kg CFC 11 eq.	1,94E-07	5,60E-09	2,99E-09	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,30E-09	0,00E+00	1,52E-09	0,00E+00
AP	mol H ⁺ eq.	1,66E-02	7,34E-05	2,36E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,64E-05	0,00E+00	3,50E-05	0,00E+00
EP-freshwater	kg PO ₄₃ - eq.	1,57E-03	8,00E-06	2,25E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,72E-06	0,00E+00	4,66E-06	0,00E+00
EP-freshwater	kg P eq.	9,39E-05	1,82E-07	1,32E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,57E-08	0,00E+00	4,13E-08	0,00E+00
EP-marine	kg N eq.	2,67E-03	1,61E-05	3,83E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,25E-06	0,00E+00	1,20E-05	0,00E+00
EP-terrestrial	mol N eq.	2,31E-02	1,79E-04	3,34E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,64E-05	0,00E+00	1,33E-04	0,00E+00
POCP	kg NMVOC eq.	8,28E-03	7,04E-05	1,20E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,39E-05	0,00E+00	3,85E-05	0,00E+00
ADP-minerals&metals*	kg Sb eq.	4,37E-05	4,06E-07	6,37E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,58E-07	0,00E+00	3,37E-08	0,00E+00
ADP-fossil*	MJ	3,76E+01	3,71E-01	5,45E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,64E-02	0,00E+00	1,03E-01	0,00E+00
WDP*	m ³	1,94E+00	1,20E-03	2,73E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,45E-04	0,00E+00	4,62E-03	0,00E+00
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption															

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

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Potential environmental impact – additional mandatory and voluntary indicators

Results per Functional Unit																
Indicator	Unit	Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG7	kg CO ₂ eq.	2,52E+00	2,26E-02	3,64E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,67E-03	0,00E+00	3,62E-03	0,00E+00
Additional voluntary indicators e.g. the voluntary indicators from EN 15804 or the global indicators according to ISO 21930:2017																

Additional voluntary indicators e.g. the voluntary indicators from EN 15804 or the global indicators according to ISO 21930:2017

*Other optional environmental impact categories are presented on LCA report

Use of resources

Results per Functional Unit																
Indicator	Unit	Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	2,07E+00	4,66E-03	2,92E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,24E-03	0,00E+00	8,33E-04	0,00E+00
PERM	MJ	3,86E-02	0,00E+00	7,71E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	2,11E+00	4,66E-03	3,00E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,24E-03	0,00E+00	8,33E-04	0,00E+00
PENRE	MJ	4,03E+01	3,93E-01	5,84E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,18E-02	0,00E+00	1,09E-01	0,00E+00
PENRM	MJ	2,19E-01	0,00E+00	4,38E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

7 The indicator includes all greenhouse gases included in GWP-total but excludes biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. This indicator is thus equal to the GWP indicator originally defined in EN 15804:2012+A1:2013.

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PENRT	MJ	4,05E+01	3,93E-01	5,88E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,18E-02	0,00E+00	1,09E-01	0,00E+00
SM	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	m ³	4,81E-02	4,22E-05	6,78E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,25E-06	0,00E+00	1,10E-04	0,00E+00
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water															

*LCIA results are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins or risks Waste production and output flows

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Waste production

Results per Functional Unit																
Indicator	Unit	Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste disposed	kg	4,48E-01	3,22E-02	2,13E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,20E-03	0,00E+00	7,00E-01	0,00E+00
Non-hazardous waste disposed	kg	3,24E-05	8,98E-07	4,98E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,26E-07	0,00E+00	1,54E-07	0,00E+00
Radioactive waste disposed	kg	6,27E-05	2,53E-06	1,00E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,89E-07	0,00E+00	6,77E-07	0,00E+00

Other output flows

Results per Functional Unit																
Indicator	Unit	Tot.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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Information on biogenic carbon content

Results per Functional Unit		
BIOGENIC CARBON CONTENT	Unit	QUANTITY
Biogenic carbon content in product	kg C	0,00E+00
Biogenic carbon content in packaging	kg C	3,53E-03

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO₂

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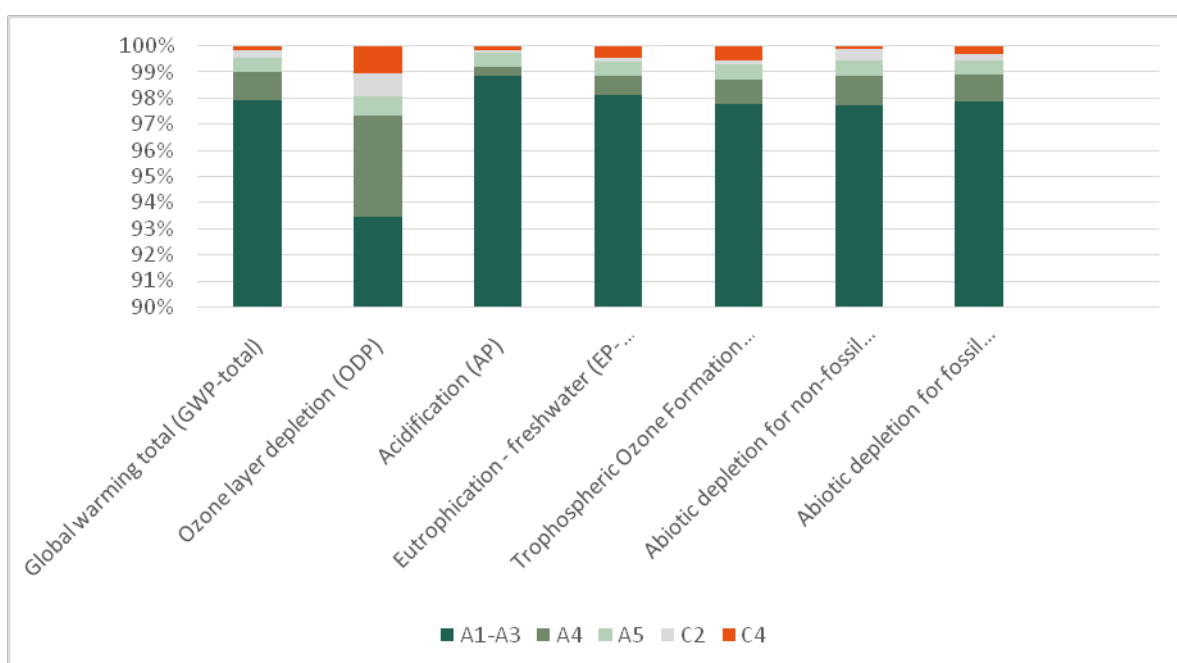
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LCA Interpretation

As we can see in from the graph, the product stage (A1-A3) is the life cycle stage with the greatest impact for all the impact categories analyzed, representing between 98,9% (Eutrophication) and 93% (Ozone layer depletion) of the total impact of the product life cycle.

The A4 represents an intermediate impact for all the impact categories analyzed. Transport (A4) represents between 4% (ozone layer depletion) and 0,36% (Acidification) of the total life cycle impact. In relation to A5 and End of life stages (C2-C4) also the impact is less than 2%.



Information related to Sector EPD

Individual EPD.

Differences versus previous versions

First versión of EPD.

References

- General Programme Instruction of the International EPD® System. Version 3.01.
- ISO 14020:2000 Environmental labels and declarations - General principles.
- ISO 14025:2010 Environmental labels and declarations - Type III Environmental Declarations - Principles and procedures.
- ISO 14040:2006 Environmental management - Life Cycle Assessment - Principles and framework.
- ISO 14044:2006 Environmental management - Life Cycle Assessment - Requirements and guidelines.
- PCR 2019:14 Construction products (EN 15804:A2) Version 1.11.
- CPC 3511 Paints and varnishes and related products.
- UNE-EN 15804:2012+A2:2019 Sustainability of construction works - Environmental Product Declarations - Core rules for the product category of construction products.
- LCA report of Macy 16/12/2021.

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VERIFICATION STATEMENT CERTIFICATE CERTIFICADO DE DECLARACIÓN DE VERIFICACIÓN

Certificate No. / Certificado nº: EPD06601

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:

PINTURAS MACY, S.A.
Ctra. Nacional 301. Km. 212,800
02630 LA RODA (Albacete) - SPAIN

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

ENAMELS
ESMALTES

with registration number **S-P-05757** in the International EPD® System (www.environdec.com)
*con número de registro **S-P-05757** en el Sistema Internacional 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) version 1.11.**
- **UN CPC 3511 Paints and varnishes and related products.**

Issued date / Fecha de emisión:	23/03/2022
Update date / Fecha de actualización:	23/03/2022
Valid until / Válido hasta:	22/03/2027
Serial Nº / Nº Serie:	EPD0660100-E



Carlos Nazabal Alsua
Manager

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.

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