Environmental Product Declaration

In accordance with ISO 14025:2006 & EN 15804:2012 +A2:2019/AC:2021

Interior & exterior wall coatings & primers

(EPD of multiple products)

EPD REGISTRATION NUMBER	PUBLICATION DATE	DATE OF VALIDITY	DATE OF REVISION	PROGRAM	PROGRAM OPERATOR	UN CPC
S-P-09840	2023-08-04	2028-08-03	2025-01-17	The International EPD® System www.environdec.com	EPD International AB	3511

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

Program Information

PROGRAM OPERATOR
EPD International AB

ADDRESS: Box 210 60, SE-100 31
Stockholm, Sweden

WEBSITE: www.environdec.com

E-MAIL ADDRESS: info@environdec.com

EPD Owner
Berling SA

ADDRESS: Thesi Agia Paraskevi, Inofita 32011

EMAIL ADDRESS: v.chalkia@berling.gr

WEBSITE: www.berling.gr

TEL: +30 22620 31663

PRODUCT CATEGORY RULES (PCR)	CEN Standard EN 15804 serves as the Core Product Category Rules (PCR) PCR 2019:14 Construction products version 1.2.5
PCR REVIEW WAS CONDUCTED BY	The technical Committee of the International EPD® System. See www.environdec.com/TC for a list of members. Review chairs: Claudia A. Pena, University of Chile, The review panel may be contacted via the Secretariat www.environdec.com/contact.
LCA ACCOUNTABILITY	SustChem Technical Consulting S.A. www.sustchem.gr
THIRD-PARTY VERIFIER: INDEPENDENT THIRD-PARTY VERIFICATON OF THE DECLARATION AND DATA, ACCORDING TO ISO 14025:2006, VIA:	Business Quality Verification P.C. Approved certification body accountable for the third-party verification www.bqv.gr – info@bqv.gr
THE CERTIFICATION BODY IS ACCREDITED BY:	Hellenic Accreditation System ESYD with accreditation number 1218
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 registered in different EPD programs may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same version number) or be based on fully-aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterization factors); have equivalent content declarations; and be valid at the time of comparison.

Version History

Original version of the EPD: The original version of this EPD was published on 2023-08-04.
Updated version of the EPD: The updated version of the EPD was uploaded on 2025-01-17.

The differences between the original and updated versions include the replacement of the company's old logo with the new one, as well as the addition of the latest product photos.

Company Profile

BERLING SA is a Greek Paint Manufacturing Industry that operates in production and distribution of building. insulating. thermal insulation. industrial. decorative paints. and furniture paints. We offer our products and services, both through a wide nationwide network partner, as well as through alternatives distribution networks.

The needs of climate, housing, construction infrastructure of the total color ecosystem, bear the signature of significant experience and Berling's contribution to the Greek area. At the same time, we look forward to continuous expansion of activities with innovative and ecological products, both in Greece and abroad.

BERLING's **drive and passion** for adding value to its customers have managed to supply high quality products for 55 years in Greek market, because as we've been saying for a long time... **Color has a Name.**

One of the many important **milestones** was in April 1998, when the company was awarded with the first European Eco label award for its Ecological interior wall paint "Petite". BERLING was the first Greek company that has been awarded with the European Union's **Ecolabel** in all sectors and the third in Europe. Since then, the certified ecological products have reached the number of 21 and the number is constantly growing.

BERLING shows sensitivity in practice for the environment and people, fully compliant with legislation and the international standards and aims at a sustainable economic development.

With respect to environment and nature, designed and implements one Environmental Management System in all stages of the Production process.

Since 2006 BERLING has been certified for implementation of both the:

EN ISO 14001:2015 standard
European EMAS regulation with number EL000047

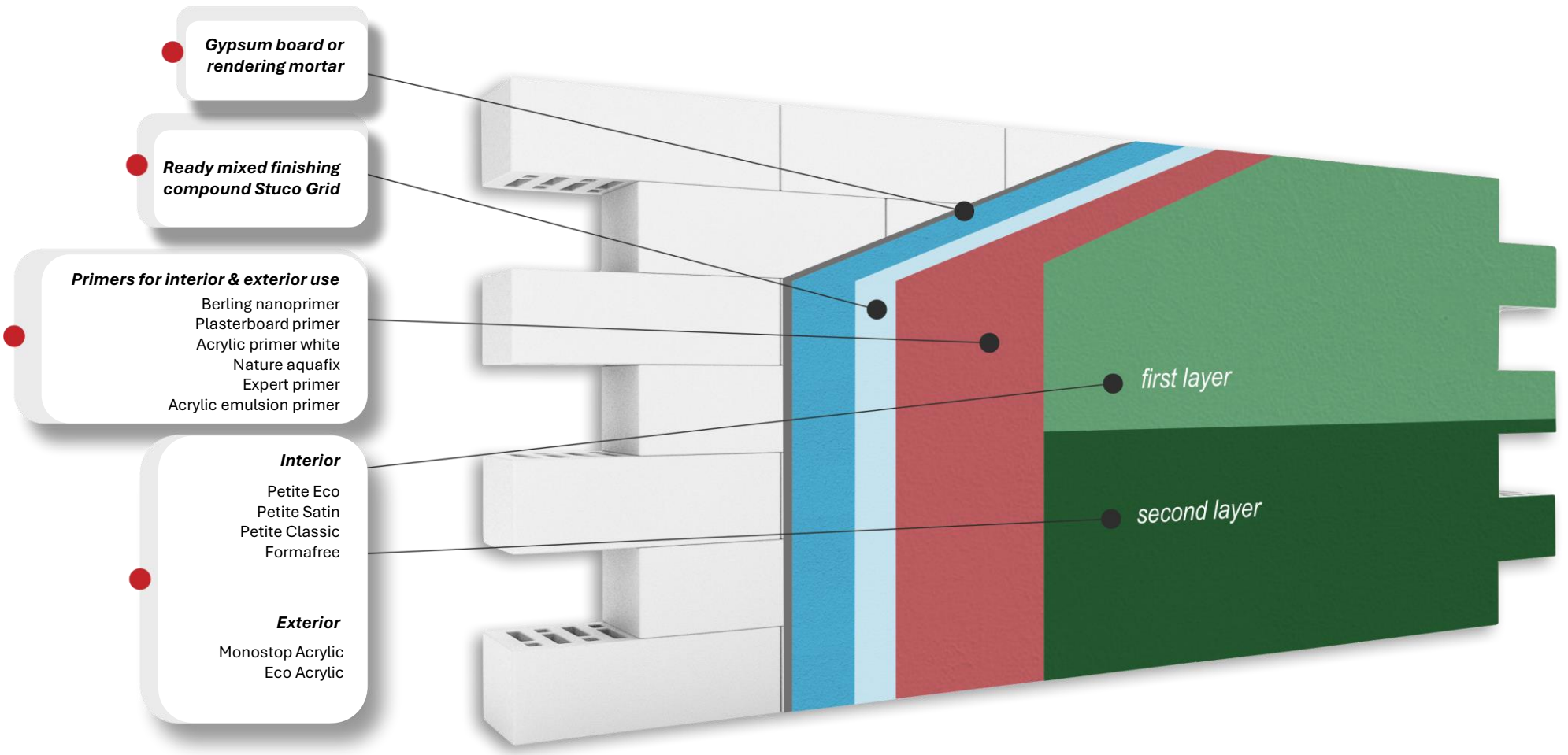
Berling is always aiming for Greener Residential Living conditions and for a greener future for the next generations.

Product Description

The products covered by this EPD are Premium quality coatings and primers. harmonized to improve the Household hygiene living conditions. reduce the Environmental CO2 Footprint while providing the Highest properties.

Applied by roller. brush. or spray which if combined with proper surface pre-treatment. in accordance with the application instructions. drying behavior. and interval times alignment. Berling's coatings can deliver projects of the highest standards meeting the highest needs.

For any detailed information about the coatings. please refer to the Technical Data Sheets issued by Berling's RnD department.



Primers for interior & exterior use
Berling nanoprimer
Plasterboard primer
Acrylic primer white
Nature aquafix
Expert primer
Acrylic emulsion primer

Interior
Petite Eco
Petite Satin
Petite Classic
Formafree

Exterior
Monostop Acrylic
Eco Acrylic

Product Information

PETITE SATIN (white base, base A, base C)

Excellent quality, ecological, emulsion paint, suitable for all kinds of interior surfaces and especially for children's bedrooms. It has high resistance to washing and a smooth, satin finish. The first Greek paint awarded with the European Ecolabel.

- Satin finish
- Excellent adhesion
- Excellent opacity
- Excellent coverage
- High washing resistance
- High whiteness
- Easy to apply
- Very low Volatile Organic Compounds content.
- Awarded with the EU Ecolabel. (Registry No EL / 044/001).

TECHNICAL SPECIFICATIONS

V.O.C	10gr/lt (Maximum Volatile Organic Compounds content ready for use)
Density	1.38 ± 0.03 gr/cm3 (ISO 2811)
Viscosity	80-100 K.U., 25oC (ASTM D562)
pH	7.7-8.7
Coverage	9-11m2/lt (ISO 6504/1)

EMULSION PAINTS FOR INTERIOR USE

Product Information

PETITE ECO (White, Base A, B, C)

Excellent quality, ecological, matt emulsion paint for indoor use, suitable for walls and ceilings. Ideal for interior use and especially for children's bedrooms. It is easily applied and demonstrates excellent coverage and washable properties. It has very good adhesion on all properly prepared surfaces and high whiteness.

- Full matt finish
- Excellent coverage & performance
- Very good adhesion
- Excellent washability
- High whiteness
- Easy to apply
- Almost odorless
- Very low Volatile Organic Compounds content
- Awarded with the EU Ecolabel (Registry No EL / 044/001)

TECHNICAL SPECIFICATIONS

V.O.C	10gr/lt (Maximum Volatile Organic Compounds content ready for use)
Density	1.40 ± 0.03 gr/cm3 (ISO 2811), for white
Viscosity	90-105 K.U.. 25oC (ASTM D562), for white
pH	7.7-8.7 < 2.5 units at 60o9-11m2/lt, (ISO 6504/1)
Coverage	11 – 13m2/lt for final surface and coverage up to 98%. (ISO 6504/1) and 17-20m2/lt, per coating

EMULSION PAINTS FOR INTERIOR USE

Product Information

PETITE CLASSIC (White, Base A, base C)

Excellent quality, odorless, with very low volatile compounds, emulsion matt paint for internal use, suitable for all kinds of surfaces. Its advanced synthesis gives an excellent aesthetic result with main characteristics high coverage and whiteness, uniform spread and levelling and good resistance to washing.

- Odorless interior wall paint
- Excellent coverage.
- Very low content of Volatile Organic Compounds.
- High whiteness.
- High performance.
- Very good adhesion.
- Full matt finish
- High resistance to wet cleaning.
- High resistance to rubbing.
- Easy to apply.

TECHNICAL SPECIFICATIONS

V.O.C	8.5 gr/lt (Maximum Volatile Organic Compounds content ready for use)
Density	1.66 ± 0.03 gr/cm3 (ISO 2811), for white
Viscosity	115-125 K.U.. 25oC (ASTM D562), for white
pH	8-9
Coverage	14-16m2/lt per coat

EMULSION PAINTS FOR INTERIOR USE

Product Information

FORMAFREE (White, Base A, B, C)

Special, high-quality water-based paint for walls and ceilings for interior use. It develops an active substrate which can eliminate the formaldehyde that is present in the air and has a zero impact regarding VOC emissions. Formafree achieves a perfect aesthetic result of high-quality standards. while also contributing to the improvement of indoor air quality.

- Formaldehyde eliminator
- Zero VOC content
- Extreme low dangerous substances content
- Total emissions category A+
- High opacity and coverage
- Good mechanical resistance
- Good resistance to often cleaning
- Fast drying properties
- Odorless

TECHNICAL SPECIFICATIONS

V.O.C	0 gr/lt (Maximum Volatile Organic Compounds content ready for use)
Density	1.57 ± 0.03 gr/cm3 (ISO 2811), for white.
Viscosity	90-105 K.U.. 25oC (ASTM D562), for white).
pH	8.5-9
Coverage	13-15m2/lt per coating

EMULSION PAINTS FOR INTERIOR USE

Product Information

MONOSTOP ACRYLIC (White, Base A, B, C)

Acrylux is of top quality and coverage 100% acrylic paint, brilliant-white, with excellent resistance to weather conditions changes, suitable for painting all types of exterior surfaces such as plaster, concrete, plasterboard, cement boards etc. Due to its special composition, no cracking appears on the surface even when applied at an ambient temperature above 400C. It is brilliant-white and gives excellent coverage, opacity, and great ease of application.

- Brilliant White acrylic paint
- High coverage and opacity
- High adhesion properties
- Excellent resistance to weather condition changes
- Great resistance to UV radiation
- Low water absorption
- Alkali resistance

TECHNICAL SPECIFICATIONS

V.O.C	35 gr/lt (Maximum Volatile Organic Compounds content ready for use)
Density	1.50 ± 0.03gr/cm3 (ISO 2811). for white
Viscosity	115-130 K.U.. 25oC (ASTM D562). for white
pH	7.7-8.7
Coverage	11 - 13m2/lt

ACRYLIC PAINTS FOR EXTERIOR USE

Product Information

ECO ACRYLIC (White base)

High quality ecological acrylic paint with high resistance to weather conditions changes, suitable for all the exterior surfaces and especially for visible concretes. It is the ideal solution for the professional user who wants ease of work and guaranteed results, in combination with a good price.

- Easy to apply
- Good adhesion (ISO 4624)
- High coverage
- Matt finish
- Great resistance to weather condition changes
- Low water absorption (EN 1062-3)
- High resistance to chalking (ISO 4628-6:2007)
- High resistance to alkalis
- (ISO 2812-4:2007)
- Low Content in Volatile Organic Compounds
- Low Content in hazardous substances
- Harmonized with the environmental requirements of the EU eco-labeling.

TECHNICAL SPECIFICATIONS

V.O.C	25 gr/lt (max content in Volatile Organic Compounds of thinned - ready to use product)
Density	1.62± 0.03 ISO 2811
Viscosity	110 – 130 K.U.. 25oC (ASTM D562). (White)
pH	7.7-8.7
Coverage	9-11 m2/lt depending on the application method and the surface absorptivity.

ACRYLIC PAINTS FOR EXTERIOR USE

Product Information

ACRYLIC EMULSION PRIMER

100% acrylic water-based primer used prior the finishing with emulsion or acrylic paints. Suitable for indoor and outdoor use.

- Transparent substrate.
- Very good adhesion.
- High performance.
- Low Volatile Organic Compounds content.

TECHNICAL SPECIFICATIONS

VOC	10gr/lt (Maximum Volatile Organic Compounds content ready for use)
Density	1.02 ± 0.03gr/cm3 (ISO 2811)
Viscosity	90-110 K.U., 25oC (ASTM D562)
pH	7.7-8.8
Coverage	10 - 12m2/lt depending on application method and the kind of the surface.

PRIMERS

Product Information

WHITE ACRYLIC PRIMER

White, semi-transparent, 100% acrylic primer for internal and external use for both emulsion and acrylic paints. Suitable for all types of surfaces such as plaster, bricks, plasterboard and surfaces already painted with emulsion or acrylic paints. It has good adhesion, high performance and facilitates the application of the final coating. It excels over the other primers due to its translucency which improves the coverage of the final coating while at the same time it can be tinted in the shade of the final paint.

- White semi-transparent substrate.
- It is tinted in light-color shades, by improving the coverage
- High adhesion.
- High performance.
- Low Volatile Organic Compound content.

TECHNICAL SPECIFICATIONS

VOC	10gr/lt (Maximum Volatile Organic Compounds content ready for use)
Density	1.20± 0.03 ISO 2811
Viscosity	60-80 K.U.. 25oC (ASTM D562)
pH	7.7-8.7
Coverage	12-14 m2/lt. depending on the application method

PRIMERS

Product Information

PLASTERBOARD PRIMER

White, water-based, acrylic primer for interior surfaces with excellent filling capacity and high coverage. It is designed to reduce the absorbency of the surface to be painted and especially for plasterboard and other structural surfaces such as plaster, concrete etc., contributing to the coverage and uniformity of the final paint.

- Excellent filling capacity.
- Reduces the absorbency of plasterboard
- Very good adhesion
- Great coverage
- It can be tinted in light shades.
- Excellent result with just one coating
- Low Volatile Organic Compounds content.

TECHNICAL SPECIFICATIONS

VOC	15gr/lt (Maximum Volatile Organic Compounds content ready for use)
Density	1.39 ± 0.03gr/cm3 (ISO 2811)
Viscosity	90-110 K.U., 25oC (ASTM D562)7.7-8.7
pH	7.7-8.7
Coverage	18 - 20m2/lt. similar absorbency of the surface to be painted.

PRIMERS

Product Information

NATURE AQUAFIX

Transparent, water based, odorless, micronize acrylic primer, environmental and user friendly for interior use. It eliminates the absorption of the surface (plaster and plasterboards), consolidates problematic surfaces (already painted with lime) and increases the adhesion of overlying water based acrylic or emulsion coatings. Nature Aquafix outweighs the traditional undercoats as it is solvent - free and environmentally friendly.

- High penetrance to the surface
- High performance
- Very good adhesion
- Very easy to apply
- Free of ammonia, lead, mercury & other heavy metals.
- Nearly odorless
- Very low in Volatile Organic Compounds
- Harmonized with directive 2004/42/EC

TECHNICAL SPECIFICATIONS

VOC	10gr/lt (Maximum Volatile Organic Compounds content ready for use)
Density	1.01± 0.02 ISO 2811 (White)
Viscosity	14-18 sec. 25oC (Flow cup 4 DIN 53211)
pH	8-8.5
Coverage	5-8 m2/lt depending on the application method and the kind of the surface

PRIMERS

Product Information

BERLING NANOPRIMER

One component, waterproof, water-based primer based on special nanotechnology resins. It penetrates deep into the lower pores of the substrate and at the same time gives it an increased hydrophobicity. This way it can stabilize the surfaces before painting, reduces their absorbency, enhances the adhesion of the paints and contributes to a more uniform spreading and better finishing. Also due to the hydrophobicity that the substrate acquires, the humidity is impeded from the exterior to the interior of the substrate and cracking is prevented. At the same time. it allows the surface to breathe and can emit any water vapor. Suitable for substrates of cement, concrete, plaster as well as for puttied surfaces. Ideal for loose chalked or painted substrates.

- One – component nanotechnology water-based hydrophobic primer.
- Helps to uniformly spread the final paints.
- Provides waterproofing properties to the substrate
- Prevents humidity from entering the substrate
- Excellent penetration capacity
- Stabilizes loose substrates before the final painting
- Ready to use - No thinning is required
- Recoated by emulsion. acrylic or insulating paints
- Low in volatile organic solvents.
- Almost odorless

TECHNICAL SPECIFICATIONS

VOC	15gr/lt (Maximum Volatile Organic Compounds content ready for use)
Density	1.02 ± 0.03gr/cm3 (ISO 2811)
Viscosity	9-16sec, 25oC (Cup 4 DIN 53211)
pH	8-9
Coverage	8-10m2/lt. depending on application method and the kind of the surface

PRIMERS

Product Information

EXPERT PRIMER

Water-based multi-purpose primer based on acrylic resins, ideal for both interior and exterior use. It stands out for its high adhesion and penetration on non-absorbent surfaces such as galvanized iron, aluminum, glass, tiles and more, as well as on absorbent surfaces like plaster, particleboard, concrete, gypsum and others. Its exceptional composition allows for the isolation and coverage of stubborn stains such as smoke, nicotine, mold, coffee, markers, preventing their reappearance. Additionally, it inhibits the migration of salts onto the final paint surface. The product offers excellent workability and provides a smooth application on various surfaces.

- Enhances the durability of the final color
- High performance
- Very good adhesion
- Very low in Volatile Organic Compounds.

TECHNICAL SPECIFICATIONS

VOC	29gr/lt (Maximum Volatile Organic Compounds content ready for use)
Density	1.40± 0.02 ISO 2811 (White)
Viscosity	105-115 K.U., 25oC (ASTM D562)
pH	8 - 9
Coverage	12-15 m2/lt depending on the type and the absorbency of the surface

PRIMERS

Content Declaration

This is an EPD of multiple products. The content declaration reflects the composition of a “worst-case” product. Based on the LCA studies, the product with the most intensive environmental impacts is the coating paint Petit Smooth Satin (white).

Composition of Petite Satin (White Base)

Product Components	**Weight (kg)**	**Biogenic Content (kg)**
Pigment & Fillers	0.35	-
Water	0.25	-
Resin	0.34	-
Additives	0.06	-
Total	1	
Packaging	**Weight (kg)**	**Biogenic Content (kg)**
Polyurethane	0.000201	-
Polypropylene	0.038	-
Wooden Pallet	0.014	0.00026

No substances included in the Candidate list of Substances of Very High Concern for authorization under the REACH Regulations that exceed 0.1% of the total weight are present in the examined products.

Production Process

COLLECTION & WEIGHTING OF RAW MATERIALS → PRE - MIXING

↓

DISPERSION OF SOLIDS → QUALITY CONTROL OF INTERMEDIATE PRODUCT

↓

ADDITION OF RAW MATERIALS → MIXING & HOMOGENIZATION

↓

STORAGE → PACKAGING

LCA Information

Declared unit:	Time representativeness:	Geographical Scope	System boundaries
The declared unit is one 1 kg of coating. For the declaration of the results, a worst-case approach has been followed.	January 2022 – December 2022	Europe	This LCA study follows a “cradle-to-gate” with modules C & D approach.

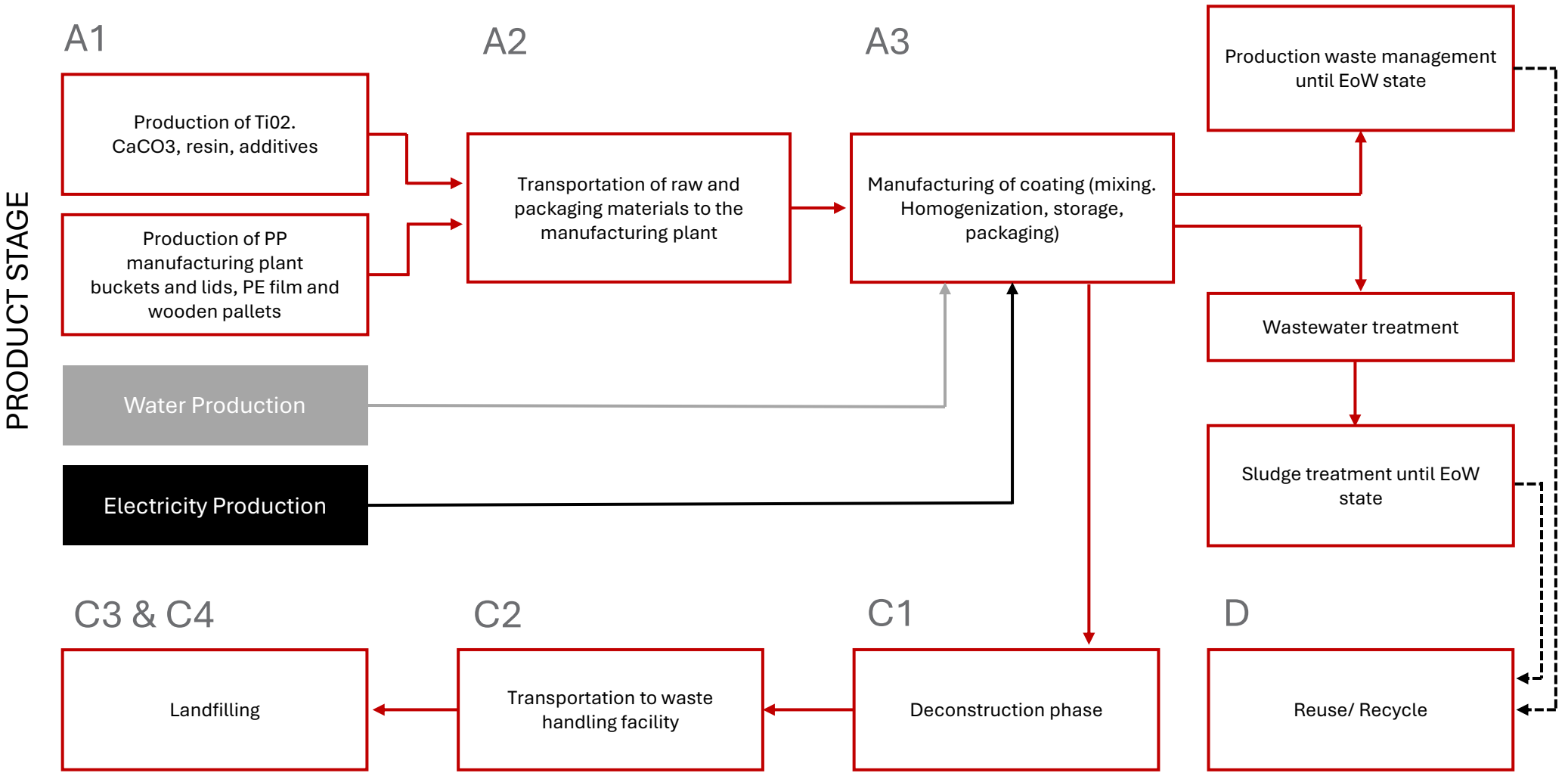
System Diagram

	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
MODULE	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
MODULES DECLARED	X	X	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X
GEOGRAPHY	EU - 28	EU - 28	GR	-	-	-	-	-	-	-	-	-	EU - 28				EU - 28
SHARE OF SPECIFIC DATA	>90%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
VARIATION – PRODUCTS	GHG-GWP variations of products from the worst-case (1.76% -70.76 %)			-	-	-	-	-	-	-	-	-	-	-	-	-	-
VARIATION - SITES	Not Relevant			-	-	-	-	-	-	-	-	-	-	-	-	-	-

DATABASES USED:
Ecoinvent 3.8.1 & Professional 2021

SOFTWARE:
GaBi ts version 10.6.0.110

System Diagram



END OF LIFE

BENEFITS & LOADS

Description of the examined Modules

A1: RAW MATERIAL SUPPLY

This Module includes the productions of raw, packaging materials, electricity and water as ancillary input.

A2: TRANSPORT

Module A2 includes the transportations of all material inputs to the manufacturing plant of Berling for the production of Petit Satin. Electircity and water are supplied through the repsective grids

A3: MANUFACTURING

Module A3 includes all the emissions related to the production processes and the treatment of production wastes up until theend-of-waste state

C1: DE-CONSTRUCTION

Regarding deconstruction/demolition, a scenario has been developed since no actual data are available. More specifically, the paint is demolished along with the rest of the building, with the use of a diesel driven excavator (100kW).

C2: WASTE PAINT TRANSPORTATION

A nominal distance of 100km is considered in relation to the transportation of waste paint from the construction/ application site to waste treatment facilities

C3/C4: WASTE TREATMENT

For this scenario, a worst-case approach is followed, due to the lack of actual data. In particular, waste paint is considered to be driven for landfilling.

D: REUSE, RECOVERY, RECYCLING POTENTIAL

In this module, there are considered the potential benefits derived from recycling/ recovery of production wastes

Cut-offs

- For simplicity reasons, the 99% of raw material inputs is included in the LCA study
- The consumption of diesel for the operation of work machines is not considered
- The consumption of ancillary chemicals for wastewater treatment are not considered.

Allocations

- Specific data for the consumption of primary packaging are used based on sale volumes. For tertiary packaging, the consumption volumes are known for the whole plant. Hence an allocation by mass is applied.
- Recorded Electricity is related to the total consumption of the plant. Hence an allocation by mass is applied.
- Production wastes are retrieved from the waste electronic registry of the company for 2022. Wastes are attributed to specific production lines, based on their occurrence and allocated by mass to the capacity of each attributed line.

Allocations

- Due to the lack of specific data for the transportation routes, a worst-case approach of road transportation is assumed. This approach is acceptable since transport by truck in general leads to higher potential environmental impacts on comparison to ship transportation.
- A default mean “Truck Euro 6 – 9.3t payload. 12 – 14t gross weight” is assumed for road transportations.
- Processes until the end-of-waste state are based on scenarios, since after arrival to the collection sites, no other information regarding the treatment of wastes is known. In particular, it is assumed that production wastes are recovered for energy production.

Environmental performance indicators

Berling Paints

Potential environmental impacts/ 1 kg of petite satin (white)

Environmental Indicator	Unit	A1-A3	C1	C2	C3	C4	D
Climate Change - total	kg CO2 eq.	2.57E+00	6.18E-04	1.23E-02	0.000E+00	5.29E-03	-5.99E-03
Climate Change - Fossil	kg CO2 eq.	2.55E+00	6.41E-04	1.22E-02	0.000E+00	5.27E-03	-5.94E-03
Climate Change - Biogenic [1]	kg CO2 eq.	1.39E-02	--2.80E-05	-1.54E-05	0.000E+00	1.86E-05	-4.30E-05
Climate Change - Land Use and Land Use Change	kg CO2 eq.	2.33E-03	5.06E-06	9.91E-05	0.000E+00	5.07E-06	6.84E-06
Global Warming Potential- GWP-GHG	kg CO2 eq.	2.55E+00	6.46E-04	1.23E-02	0.000E+00	5.27E-03	-5.93E-03
Ozone Depletion	kg CFC 11 eq.	2.58E-07	7.89E-20	1.55E-18	0.000E+00	2.13E-09	-1.12E-16
Acidification	Mole of H+ eq.	1.26E-02	3.04E-06	1.18E-05	0.000E+00	4.95E-05	-1.14E-05
Eutrophication, fresh water	kg P eq.	9.50E-04	1.83E-09	3.59E-08	0.000E+00	4.82E-07	-1.31E-08
Eutrophication, marine	kg N eq.	2.30E-03	1.43E-06	3.69E-06	0.000E+00	1.72E-05	-2.88E-06
Eutrophication, terrestrial	Mole N eq.	2.25E-02	1.58E-05	4.44E-05	0.000E+00	1.89E-04	-3.05E-05
Photochemical Ozone Formation, human health	kg NMVOC eq.	9.12E-03	4.03E-06	1.01E-05	0.000E+00	5.49E-05	-7.91E-06
Resource use, mineral and metals [2]	kg Sb eq.	1.62E-02	4.701E-11	9.21E-10	0.000E+00	1.20E-08	-1.47E-09
Resource use. fossils [2]	MJ	5.38E+01	8.220E-03	1.61E-01	0.000E+00	1.48E-01	-1.05E-01
Water Use [2]	m3 world equiv.	1.82E+00	5.362E-06	1.05E-04	0.000E+00	6.77E-03	-7.53E-04

[1] This indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product
[2] The results of the specific environmental impact indicators shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.

Environmental performance indicators

Berling Paints

Potential environmental impacts/ 1 kg of petite satin (white)

Energy use	Unit	A1-A3	C1	C2	C3	C4	D
Use of renewable primary energy excluding renewable primary energy resources as raw materials (PERE)	MJ.Net Calorific Value	3.09E+00	4.59E-04	8.99E-03	0.000E+00	1.28E-03	-3.85E-02
Use of renewable primary energy resources used as raw materials (PERM)	MJ.Net Calorific Value	0.00E+00	0.00E+00	0.00E+00	0.000E+00	0.00E+00	0.00E+00
Total use of renewable primary energy resources (primary energy resources used as raw material and primary energy) (PERT)	MJ.Net Calorific Value	3.09E+00	4.59E-04	8.99E-03	0.000E+00	1.28E-03	-3.85E-02
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials (PENRE)	MJ.Net Calorific Value	5.38E+01	8.23E-03	1.61E-01	0.000E+00	1.48E-01	-1.05E-01
Use of non-renewable primary energy resources used as raw materials (PENRM)	MJ.Net Calorific Value	1.30E-02	0.00E+00	0.00E+00	0.000E+00	0.00E+00	0.00E+00
Total use of non-renewable primary energy resources (PENRT)	MJ.Net Calorific Value	5.38E+01	8.23E-03	1.61E-01	0.000E+00	1.48E-01	-1.05E-01
Use of renewable secondary fuels	MJ.Net Calorific Value	0.00E+00	0.00E+00	0.00E+00	0.000E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels	MJ.Net Calorific Value	0.00E+00	0.00E+00	0.00E+00	0.000E+00	0.00E+00	0.00E+00
Use of secondary materials	kg	0.00E+00	0.00E+00	0.00E+00	0.000E+00	0.00E+00	0.00E+00
Use of net fresh water	m3	4.59E-02	5.25E-07	1.03E-05	0.000E+00	1.58E-04	-3.79E-05

Environmental performance indicators

Berling Paints

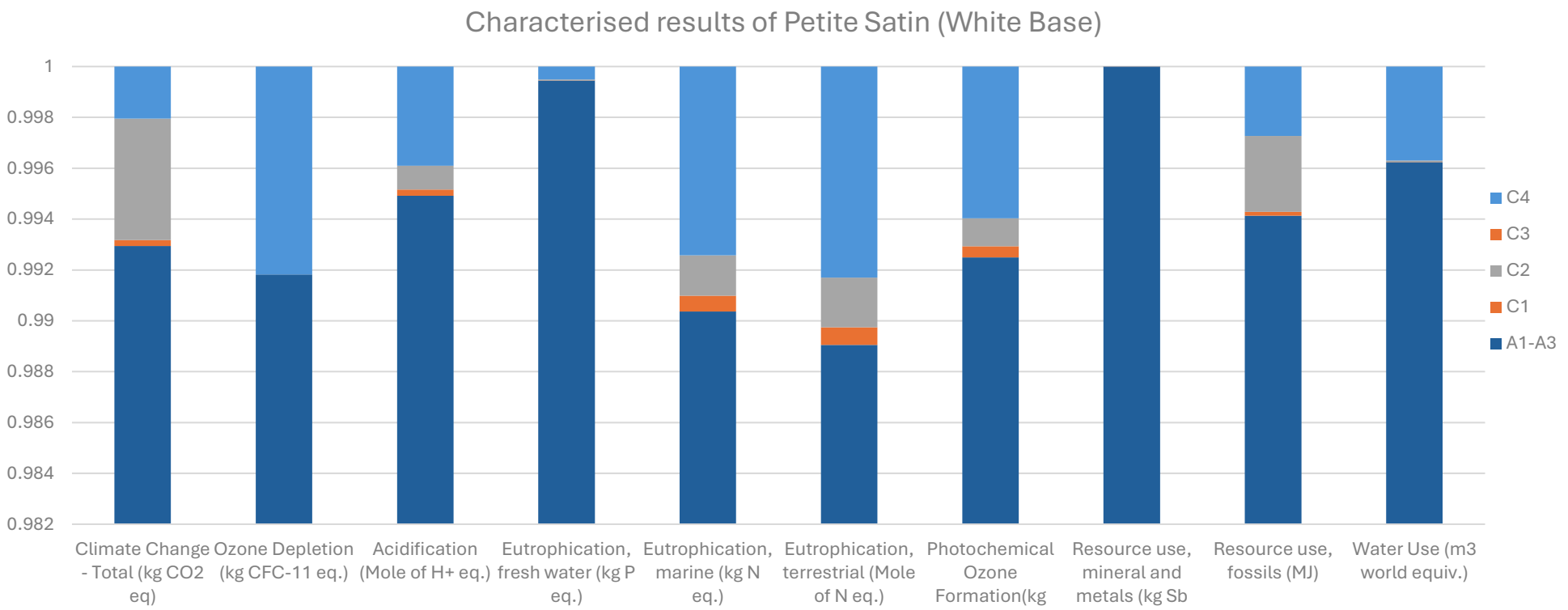
Potential environmental impacts/ 1 kg of petite satin (white)

Additional Environmental Impact Indicators	Unit	A1-A3	C1	C2	C3	C4	D
Particulate Matter emissions	Disease incidence	7.86E-08	2.61E-12	7.09E-11	0.00E+00	9.70E-10	-1.04E-10
Ionizing radiation human [3]	kBq U235 eq.	2.25E-01	1.43E-06	2.79E-05	0.00E+00	6.53E-04	-2.03E-03
Eco-toxicity, freshwater	CTUe	5.85E+01	5.94E-03	1.16E-01	0.00E+00	9.34E-02	-3.55E-02
Human toxicity, cancer effects	CTUh	2.68E-09	1.20E-13	2.35E-12	0.00E+00	2.36E-12	-1.14E-12
Human to -cancer effects [2]	CTUh	1.12E-07	7.21E-12	1.21E-10	0.00E+00	6.06E-11	4.24E-11
Land use related impacts/ Soil quality [2]	-	2.33E+01	2.82E-03	5.53E-02	0.00E+00	3.09E-01	-2.64E-02
Waste							
Hazardous waste disposed	kg	3.71E-10	4.15E-13	8.13E-12	0.00E+00	0.00E+00	-2.60E-11
Non-hazardous waste disposed	kg	1.16E-03	1.22E-06	2.40E-05	0.00E+00	0.00E+00	9.08E-04
Radioactive waste disposed	kg	3.47E-05	9.96E-09	1.95E-07	0.00E+00	0.00E+00	-1.24E-05
Output flows							
Components for re-use	kg	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
Materials for energy recovery	kg	1.51E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy, electricity	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy, thermal	-1.24E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

[2] The results of the specific environmental impact indicators shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.
[3] This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents. occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil. from radon and from some construction materials is also not measured by this indicator.

Environmental performance indicators

The displayed figure represents the contribution of each Life Cycle Stage to each of the core environmental impact indicators. As is clearly depicted, the core contribution to the environmental performance of the product, derives from Modules A1-A3, consisting of production of all input materials and energy, transportation of all inputs to the manufacturing plant, and production processes.



References

- International EPD® System, PCR 2019:14 Construction Products, version 1.2.5 (EN 15804:A2)
- EN 15804:2012+A2:2019/AC 2021 Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products
- International EPD® System, General Program Instructions for the International EPD System, version 4.01
- ISO 14020:2000 – Environmental Labels and Declarations – General Principles
- ISO 14025:2006 - Environmental labels and declarations – Type III environmental declarations - Principles and procedures
- ISO 14044:2006 - Environmental management – Life Cycle assessment – Requirements and guidelines
- The International EPD® System – The International EPD System is a program for type III environmental declarations, maintaining a system to verify and register EPDs as well as keeping a library of EPDs and PCRs in accordance with ISO 14025. www.environdec.com
- Ecoinvent/ Ecoinvent Centre – www.Eco-invent.org
- Sphera – GaBi Product Sustainability software – www.sphera.com
- Residual Energy Mix 2021 from Renewable Energy Sources Operator & Guarantees of Origin
- (DAPEEP SA)