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Type III Environmental Product Declaration No. 823/2025

CAMELEO

DECO COATINGS

CRAFTCLAY CLAY COATINGS

CEMMENTAL HYBRID COATINGS

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BASIC INFORMATION

This declaration is the Type III Environmental Product Declaration (EPD) based on EN 15804+A2 and verified according to ISO 14025 by an external auditor. It contains the information on the impacts of the declared construction materials on the environment and their aspects verified by the independent body according to ISO 14025. Basically, comparison or evaluation of EPD data is possible only if all the compared data were created according to EN 15804+A2.

Life cycle analysis (LCA): A1-A3, C1-C4 and D modules in accordance with EN 15804+A2 (Cradle-to-Gate with options)

The year of preparing the EPD: 2024

Product standard: EN 15824:2009

LCA contractor: EXERGY, Powstańców Śląskich 32B/4, 45-092 Opole**….**

Service Life: 30 years

PCR: ITB-PCR A, v. 1.6

Declared unit: 1kg

Reasons for performing LCA: B2B

Representativeness: Polish, European

PRODUCTS DESCRIPTION AND APPLICATION

The EPD covers the full range of decorative finishing products manufactured by CAMELEO, divided into two main categories: dry products and wet products. Each product line is designed to meet the aesthetic, functional, and environmental expectations of modern interior design and sustainable architecture.
Dry products include:
CAMELEO – a line of mineral-based decorative coatings offering a variety of textures and finishes, such as natural stone, velvet, and concrete effects.
CRAFTCLAY – a collection of clay-based finishes that bring warmth and earthy tones to interior spaces, emphasizing natural aesthetics and tactile surfaces.
CEMMENTAL – cementitious decorative plasters designed to replicate raw concrete and industrial surfaces, ideal for contemporary architectural styles.
Wet products include:
CAMELEO – water-based paints and coatings available in matte, satin, and glossy finishes, suitable for both walls and ceilings.
CRAFTCLAY – clay-effect coatings in liquid form, allowing for seamless application and smooth finishes with natural color variations.
CEMMENTAL – wet-applied concrete-look finishes providing a raw, urban aesthetic with high durability and ease of use.
All CAMELEO products are developed with sustainability in mindThe formulations are free from harmful substances, making them suitable for residential, commercial, and public spaces.

Fig. 1 Representative decorative finishes from CAMELEO product lines: CraftClay (natural clay textures), Cemmental (concrete-inspired surfaces), and Cameleo (classic and modern effects including stucco, rust, and metallic finishes).

Table 1. Product details and technical properties of the CAMELEO DECO COATINGS, CRAFTCLAY CLAY COATINGS, CEMMENTAL HYBRID COATINGS

Property	CAMELEO	CRAFTCLAY	CEMMENTAL
Type	Decorative water-based coatings	Clay-based decorative coatings	Cement-based decorative coatings
Form	Liquid (wet application)	Paste / Liquid	Powder (mixed with water before application)
Application Method	Brush, roller, or spray	Trowel, spatula	Trowel, roller, or sponge
Effect Types	Stucco, velvet, metallic, rust, patina, satin & gloss finishes	Earthy textures, natural clay, handcrafted look	Raw concrete, urban/industrial, smooth or structured finishes
Binder	Water-based acrylic or hybrid binder	Natural clay and mineral binders	White cement and mineral binders
Pigments	Mineral and synthetic pigments	Natural earth pigments	Mineral pigments
VOC Content	Low (<30 g/l)	Very low	Low
Density (wet/mixed)	~1.3 g/cm³	~1.5 g/cm³	~1.6–1.8 g/cm³
Packaging	Buckets (1L / 5l / 10L)	Buckets or tubs (5kg / 10kg)	Paper bags with lining (10kg / 20kg)
Coverage	~8–12 m²/lper coat	~1.5–3 kg/m² (depending on texture)	~2–4 kg/m² (depending on thickness)
Finish	Matte / Satin / Gloss	Matte, tactile finish	Matte or natural raw finish
Recommended Use	Interiors: walls, ceilings	Interiors: feature walls, natural designs	Interiors: walls, commercial & modern industrial spaces
Environmental Profile	Low-VOC, water-based, suitable for green buildings	Mineral-based, no harmful emissions	Cementitious, long-lasting, recyclable surface
Compliance	REACH, EN 13300	REACH-compliant, natural components	REACH, CE-marked where applicable
Maintenance	Washable, depending on finish	Dust-off recommended, avoid strong chemicals	Occasional dry cleaning or damp cloth, resealing optional

.LIFE CYCLE ASSESSMENT (LCA) – general rules applied

Unit

The declared unit is 1 kg of **CAMELEO DECO COATINGS, CRAFTCLAY CLAY COATINGS, CEMMENTAL HYBRID COATINGS**

System boundary

The life cycle assessment of the declared products covers the “Product Stage” (modules A1–A3), as well as modules C1–C4 and D, in accordance with EN 15804+A2 and ITB PCR A, v. 1.6 (cradle to gate with options). The analysis includes raw material supply, transport, and production processes. All relevant energy, water, and material inputs, as well as emissions and waste generated during production, have been inventoried and included. Packaging materials (e.g. plastic buckets, paper bags, shrink film) are included within system boundaries. The total mass and energy of omitted processes does not exceed 5% of total environmental impact. Capital goods (infrastructure, machinery) and transport of employees were excluded from the assessment.

Allocation

The environmental impacts have been allocated to two main product categories: dry products (e.g. Cemmental, dry CraftClay) and wet products (e.g. Cameleo, liquid CraftClay). The wet products are derived from dry product bases by adding water during the formulation process. Therefore, emissions and inputs have been proportionally allocated to both product categories, considering both mass and process intensity (e.g. mixing, dispersion, packaging). Shared impacts such as energy, auxiliary materials, and emissions were distributed according to mass contribution and functional similarity. Recycled content and packaging were modeled using the avoided burden approach. No environmental benefits were claimed beyond the system boundary.

System boundaries and assumptions

The analysis includes material inputs such as mineral binders (cement, clay, lime), fillers, pigments, water, and additives. Wet products involve additional water and mixing energy. Production waste and packaging waste were included. Excluded processes (e.g. transport of workers, capital equipment) represent less than 5% of total impact per EN 15804+A2. No credits were allocated for recycling packaging waste beyond system boundaries.

Modules A1 and A2: Raw materials supply and transport

Raw materials are sourced from European suppliers and include mineral binders, pigments, additives, water and packaging materials. Transport distances are based on supplier declarations or European averages. Environmental impacts were modeled using representative datasets from the Ecoinvent database (v3.8), based on actual formulations for each product group.

Module A3: Production

Dry products are manufactured by dosing and mixing dry powders, fillers and pigments, then packaging into paper bags or buckets. Wet products follow a similar process, with the addition of water and dispersing agents in high-shear mixers. Both types are subject to quality control and automated or manual packaging. Electricity, gas and water use, process emissions, and waste treatment were included based on on-site data and engineering estimates. The production processes carried out at CAMELEO are shown in Figure 2.

Results presentation

Separate result tables are presented for dry product group and wet product group, reflecting their individual compositions, manufacturing processes, and functional differences. Environmental indicators include climate change potential, resource use, water consumption, and waste generation per 1 kg of product.

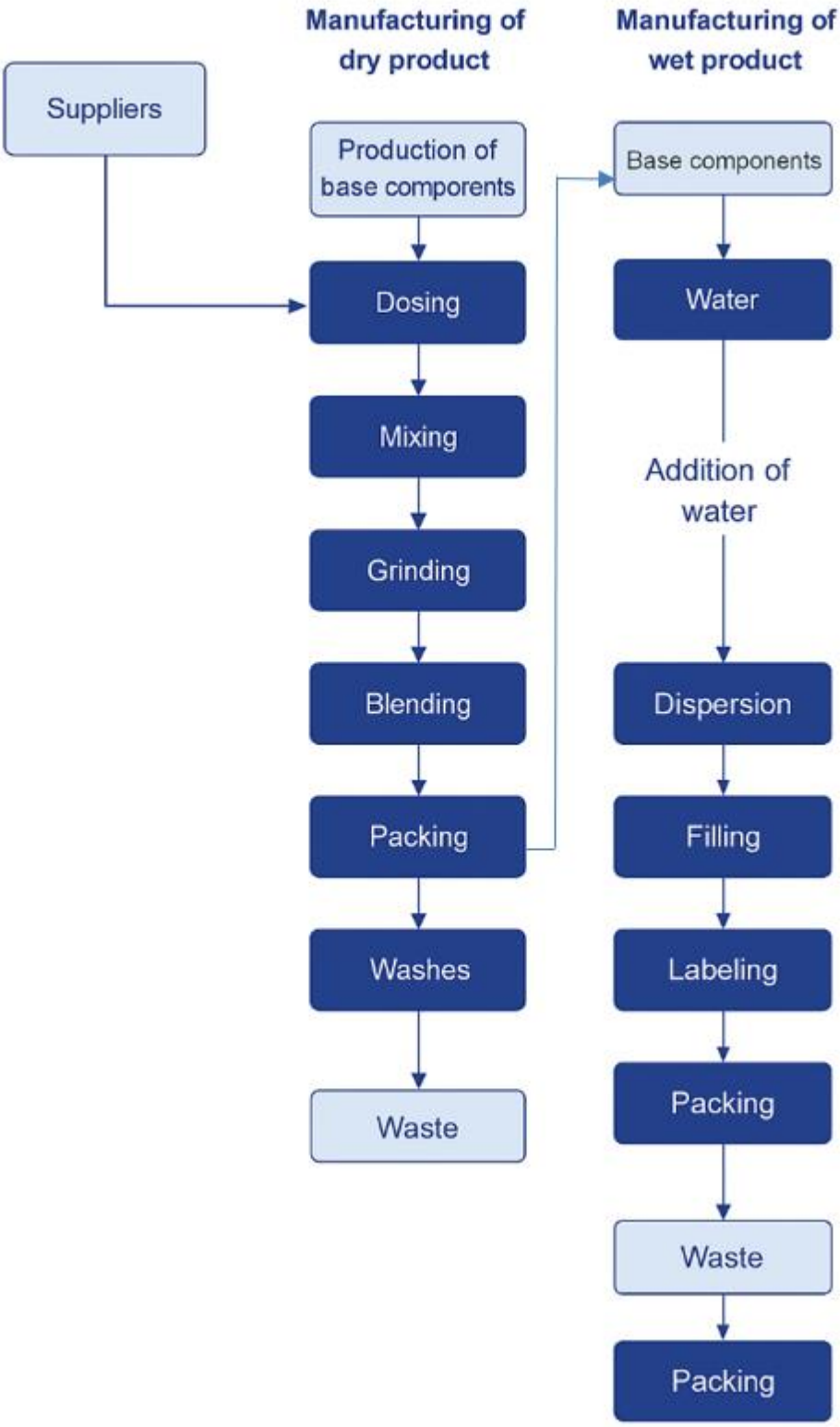

Figure 2. A basic scheme CAMELEO **DECO COATINGS , CRAFTCLAY CLAY COATINGS, CEMMENTAL HYBRID COATINGS** manufacturing process

Modules C1–C4 end-of-life (EOL) and D

The end-of-life scenario includes both dry and wet decorative coating products. At the end of their service life, coatings are typically removed mechanically (C1) and managed through mixed construction. Based on general practice for such materials, 10% is assumed to be landfilled, while 90% may be recovered or recycled, primarily through inert material recovery or use as filler in construction.

Electricity consumption at the end-of-life stages (modules C2 and C4) was modeled using the average European electricity mix from Ecoinvent database for PL area, due to the unknown final destination of the product.

The scenario for Module C2 assumes that construction and demolition waste is transported over a distance of 50 km to a waste processing facility using a diesel-powered lorry with a load capacity of 7.5 to 16 tonnes, compliant with the EURO 4 emissions standard. A full load is assumed for the outbound trip and an empty return. Emissions are calculated based on data from the Ecoinvent v3.10 database, in line with the requirements of EN 15804+A2.

Module D accounts for the potential environmental benefits associated with the end-of-life treatment of the product. In this assessment, the following scenario has been applied. It is assumed that 5% of the material is recycled at the end of life, replacing an equivalent amount of primary mineral aggregate used in construction applications. The remaining 95% is disposed of via landfilling, with no further recovery. The environmental credits reported in Module D reflect the avoided impacts associated with the production of primary aggregate.

Emissions and benefits were calculated based on average data from Ecoinvent v3.10, following the recommendations of EN 15804 and applicable PCR guidance.

The negative values in Module D therefore represent potential environmental savings resulting from the substitution of primary materials through recycling activities.

Table 2. End-of-life scenario for CAMELEO product components

Material	Recycling [%]	Landfilling [%]
Waste product	0.90	0.10

Data collection period

The data used for this EPD refers to the production period: 01.01.2024 – 31.12.2024. The life cycle assessment was performed for the European and Polish market context.

Data quality

Primary data was collected directly from CAMELEO's production site and reflects current manufacturing practices. No data used is older than 10 years. Background processes such as energy, transport, and raw materials were modeled using the Ecoinvent v.3.10 database. Data quality was assessed according to ITB verification standards, including consistency, completeness, and representativeness. No mass balance approach was used.

Assumptions and estimates

The environmental results presented are based on weighted averages of dry and wet product formulations. Wet products are modeled as hydrated versions of dry bases, with emissions allocated accordingly. Proxy datasets were used when specific materials were not available in Ecoinvent, with selection based on composition and function.

Calculation rules

The LCA was performed using openLCA software in accordance with EN 15804+A2 and ITB PCR A v.1.6.
The following environmental indicators were included:

- Global warming potential (GWP)
- Acidification and eutrophication
- Ozone formation and depletion
- Abiotic resource depletion
- Waste use and waste generation

Impact calculations were performed using CML-IA baseline method where applicable.

Additional information

Electricity for the Polish market was modeled using Ecoinvent v.3.10 and supplemented with updated national data from KOBiZE. The applied carbon intensity factor was: 0.698 kg CO_2/kWh

No additional environmental or health protection measures are required beyond those specified by law.

LIFE CYCLE ASSESSMENT (LCA) – Results

Declared unit

The declaration refers to declared unit (DU) – 1 kg of the averaged dry and 1 kg of the averaged wet decorative finishing products **DECO COATINGS , CRAFTCLAY CLAY COATINGS, CEMMENTAL HYBRID COATINGS** manufactured by Cameleo Leśniewicz Gradkowska Sp.J.

The following life cycle modules (Table 3) were included in the analysis.

Table 3. System boundaries for the environmental characteristic of the 1 kg of the averaged dry and 1 kg of the averaged wet decorative finishing products CAMELEO DECO COATINGS, CRAFTCLAY CLAY COATINGS, CEMMENTAL HYBRID COATINGS manufactured by Cameleo Leśniewicz Gradkowska Sp.J.

Environmental assessment information (MD – Module Declared, MND – Module Not Declared, INA – Indicator Not Assessed)																
Product stage			**Construction process**		**Use stage**							**End of life**				**Benefits and loads beyond the system boundary**
Raw material supply	Transport	Manufacturing	Transport to construction site	Construction-installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction 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**
MD	**MD**	**MD**	**MND**	**MND**	**MND**	**MND**	**MND**	**MND**	**MND**	**MND**	**MND**	**MD**	**MD**	**MD**	**MD**	**MD**

The declaration refers to declared unit (DU) – 1 kg of the averaged dry and 1 kg of the averaged wet decorative finishing products DECO COATINGS , CRAFTCLAY CLAY COATINGS, CEMMENTAL HYBRID COATINGS manufactured by Cameleo Leśniewicz Gradkowska Sp.J.

The following life cycle modules (Table 3) were included in the analysis. The following tables 4-7 show the environmental impacts of the life cycle of declared modules (A1- A3, C1-C4+D).

Table 4. Life cycle assessment (LCA) results of the 1 kg of the averaged **dry** decorative finishing products CAMELEO DECO COATINGS , CRAFTCLAY CLAY COATINGS, CEMMENTAL HYBRID COATINGS manufactured by Cameleo Leśniewicz Gradkowska Sp.J.

Indicator	Unit	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
Global Warming Potential - total	eq. kg CO_2	8.43E-01	2.94E-02	2.51E-01	1.12E+00	9.05E-02	1.20E-02	6.09E-01	6.74E-02	-5.92E-01
Greenhouse potential - fossil	eq. kg CO_2	8.42E-01	2.93E-02	2.35E-01	1.11E+00	8.98E-02	1.20E-02	6.06E-01	6.71E-02	-5.88E-01
Greenhouse potential - biogenic	eq. kg CO_2	2.40E-04	2.02E-05	1.64E-02	1.67E-02	5.80E-04	7.02E-06	2.80E-03	2.50E-04	-3.01E-03
Global warming potential - land use and land use change	eq. kg CO_2	4.20E-04	9.65E-06	4.32E-05	4.73E-04	3.15E-05	3.78E-06	3.00E-04	3.26E-05	-2.70E-04
Stratospheric ozone depletion potential	eq. kg CFC 11	1.78E-08	5.86E-10	7.24E-09	2.56E-08	3.71E-10	2.40E-10	1.45E-08	1.61E-09	-1.40E-08
Soil and water acidification potential	eq. mol H+	3.52E-03	1.20E-04	8.40E-04	4.48E-03	6.40E-04	3.59E-05	2.35E-03	2.60E-04	-3.96E-03
Eutrophication potential - freshwater	eq. kg P	1.80E-04	1.97E-06	1.20E-04	3.02E-04	1.10E-04	7.86E-07	1.40E-04	1.49E-05	-1.20E-04
Eutrophication potential - seawater	eq. kg N	6.10E-04	4.40E-05	2.30E-04	8.84E-04	9.29E-05	1.21E-05	4.60E-04	5.04E-05	-4.50E-04
Eutrophication potential - terrestrial	eq. mol N	6.22E-03	6.20E-04	1.43E-03	8.27E-03	8.10E-04	1.30E-04	4.71E-03	5.20E-04	-4.57E-03
Potential for photochemical ozone synthesis	eq. kg NMVOC	3.14E-03	1.80E-04	5.40E-04	3.86E-03	2.30E-04	5.67E-05	2.45E-03	2.70E-04	-2.40E-03
Potential for depletion of abiotic resources - non-fossil resources	eq. kg Sb	6.61E-06	9.97E-08	1.11E-07	6.82E-06	3.17E-08	3.93E-08	5.26E-06	5.84E-07	-5.14E-06
Abiotic depletion potential - fossil fuels	MJ	1.48E+01	4.14E-01	2.72E+00	1.79E+01	1.04E+00	1.68E-01	1.20E+01	1.33E+00	-1.16E+01
Water deprivation potential	eq. m^3	3.02E-01	2.00E-03	3.05E-02	3.35E-01	1.95E-02	8.00E-04	2.11E-01	2.31E-02	-2.84E-01

Table 5. Life cycle assessment (LCA) results of the 1 kg of the averaged **dry** decorative finishing products CAMELEO DECO COATINGS , CRAFTCLAY CLAY COATINGS, CEMMENTAL HYBRID COATINGS manufactured by Cameleo Leśniewicz Gradkowska Sp.J.

Indicator	Unit	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
Particulate matter	disease incidence	3.04E-08	2.37E-09	1.85E-09	3.46E-08	1.07E-09	8.13E-10	2.25E-08	2.47E-09	-2.53E-08
Potential human exposure efficiency relative to U235	eg. kBq U235	5.14E-02	5.00E-04	3.94E-03	5.58E-02	3.21E-03	2.60E-04	4.03E-02	4.42E-03	-3.53E-02
Potential comparative toxic unit for ecosystems	CTUe	5.16E+00	1.11E-01	6.97E-01	5.97E+00	2.63E-01	4.39E-02	3.79E+00	4.19E-01	-3.51E+00
Potential comparative toxic unit for humans (cancer effects)	CTUh	2.34E-09	2.06E-10	3.79E-10	2.93E-09	1.14E-10	7.19E-11	1.61E-09	1.78E-10	-1.72E-09
Potential comparative toxic unit for humans (non-cancer effects)	CTUh	8.68E-09	2.66E-10	2.77E-09	1.17E-08	1.23E-09	1.01E-10	5.74E-09	6.35E-10	-5.86E-09
Potential soil quality index	dimensionless	3.32E+00	2.47E-01	3.39E-01	3.91E+00	2.41E-01	8.63E-02	2.45E+00	2.59E-01	-2.12E+00

Table 6. Life cycle assessment (LCA) results of the 1 kg of the averaged **dry** decorative finishing products CAMELEO DECO COATINGS , CRAFTCLAY CLAY COATINGS, CEMMENTAL HYBRID COATINGS manufactured by Cameleo Leśniewicz Gradkowska Sp.J.

Indicator	Unit	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
Consumption of renewable primary energy - excluding renewable primary energy sources used as raw materials	MJ	6.00E-01	6.18E-03	1.17E-01	7.23E-01	1.01E-01	2.92E-03	4.25E-01	4.62E-02	-3.96E-01
Consumption of renewable primary energy resources used as raw materials	MJ	1.10E-01	8.50E-04	1.31E-02	1.24E-01	1.12E-02	3.10E-04	8.82E-02	8.11E-03	-9.46E-02
Total consumption of renewable primary energy resources	MJ	7.10E-01	7.03E-03	1.30E-01	8.47E-01	1.12E-01	3.23E-03	5.13E-01	5.43E-02	-4.90E-01
Consumption of non-renewable primary energy - excluding renewable primary energy sources used as raw materials	MJ	1.40E+01	3.76E-01	2.61E+00	1.70E+01	1.03E+00	1.52E-01	1.13E+01	1.25E+00	-1.09E+01
Consumption of non-renewable primary energy resources used as raw materials	MJ	8.33E-01	3.86E-02	1.14E-01	9.86E-01	9.60E-03	1.56E-02	6.73E-01	7.47E-02	-6.61E-01
Total consumption of non-renewable primary energy resources	MJ	1.48E+01	4.14E-01	2.72E+00	1.79E+01	1.04E+00	1.68E-01	1.20E+01	1.33E+00	-1.16E+01
Consumption of secondary materials	kg	3.01E-02	4.70E-04	8.22E-03	3.88E-02	6.93E-03	2.10E-04	2.40E-02	2.63E-03	-2.36E-02
Consumption of renew. secondary fuels	MJ	1.47E-02	1.30E-04	4.57E-03	1.94E-02	4.00E-03	7.03E-05	1.20E-02	1.31E-03	-1.02E-02
Consumption of non-renewable secondary fuels	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
Net consumption of freshwater	m^3	8.34E-03	5.50E-05	3.14E-03	1.15E-02	2.69E-03	2.27E-05	5.96E-03	6.50E-04	-7.41E-03

Table 7. Life cycle assessment (LCA) results of the 1 kg of the averaged **dry** decorative finishing products CAMELEO DECO COATINGS , CRAFTCLAY CLAY COATINGS, CEMMENTAL HYBRID COATINGS manufactured by Cameleo Leśniewicz Gradkowska Sp.J.

Indicator	Unit	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
Hazardous waste	kg	6.59E-02	4.10E-04	5.44E-03	7.18E-02	3.72E-03	1.50E-04	5.00E-02	5.54E-03	-3.64E-02
Non-hazardous waste	kg	1.13E+00	4.50E-03	1.41E-01	1.28E+00	8.79E-03	1.87E-03	4.94E-01	5.47E-02	-1.24E+00
Radioactive waste	kg	1.31E-05	1.32E-07	9.68E-07	1.42E-05	7.91E-07	6.41E-08	1.03E-05	1.13E-06	-9.00E-06
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
Materials for recycling	kg	2.71E-02	4.20E-04	7.92E-03	3.54E-02	6.71E-03	1.90E-04	2.21E-02	2.42E-03	-1.92E-02
Materials for energy recovery	kg	6.58E-06	5.88E-08	2.05E-06	8.69E-06	1.80E-06	3.16E-08	5.38E-06	5.89E-07	-4.59E-06
Exported Energy	MJ	7.85E-03	6.97E-05	9.15E-05	8.01E-03	2.95E-05	3.61E-05	6.36E-03	7.00E-04	-5.55E-03

Table 8. Life cycle assessment (LCA) results of the 1 kg of the averaged **wet** decorative finishing products CAMELEO DECO COATINGS , CRAFTCLAY CLAY COATINGS, CEMMENTAL HYBRID COATINGS manufactured by Cameleo Leśniewicz Gradkowska Sp.J.

Indicator	Unit	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
Global Warming Potential - total	eq. kg CO_2	8.58E-01	2.29E-02	2.51E-01	1.13E+00	9.05E-02	1.20E-02	2.34E-01	2.60E-02	-2.33E-01
Greenhouse potential - fossil	eq. kg CO_2	8.57E-01	2.24E-02	2.35E-01	1.11E+00	8.98E-02	1.20E-02	2.33E-01	2.59E-02	-2.32E-01
Greenhouse potential - biogenic	eq. kg CO_2	3.70E-04	1.58E-05	1.64E-02	1.68E-02	5.80E-04	7.02E-06	9.10E-04	1.00E-04	-8.90E-04
Global warming potential - land use and land use change	eq. kg CO_2	9.00E-04	7.52E-06	4.32E-05	9.51E-04	3.15E-05	3.78E-06	1.30E-04	1.39E-05	-1.20E-04
Stratospheric ozone depletion potential	eq. kg CFC 11	3.02E-08	4.57E-10	7.24E-09	3.79E-08	3.71E-10	2.40E-10	7.43E-09	8.25E-10	-7.39E-09
Soil and water acidification potential	eq. mol H+	3.59E-03	9.10E-05	8.40E-04	4.52E-03	6.40E-04	3.59E-05	9.10E-04	1.00E-04	-9.00E-04
Eutrophication potential - freshwater	eq. kg P	2.00E-04	1.54E-06	1.20E-04	3.22E-04	1.10E-04	7.86E-07	5.01E-05	5.57E-06	-4.94E-05
Eutrophication potential - seawater	eq. kg N	6.40E-04	3.43E-05	2.30E-04	9.04E-04	9.29E-05	1.21E-05	1.80E-04	2.01E-05	-1.80E-04
Eutrophication potential - terrestrial	eq. mol N	6.86E-03	3.70E-04	1.43E-03	8.66E-03	8.10E-04	1.30E-04	1.93E-03	2.10E-04	-1.92E-03
Potential for photochemical ozone synthesis	eq. kg NMVOC	3.39E-03	1.40E-04	5.40E-04	4.07E-03	2.30E-04	5.67E-05	1.03E-03	1.10E-04	-1.02E-03
Potential for depletion of abiotic resources - non-fossil resources	eq. kg Sb	9.59E-06	7.33E-08	1.11E-07	9.77E-06	3.17E-08	3.93E-08	2.88E-06	3.20E-07	-2.87E-06
Abiotic depletion potential - fossil fuels	MJ	1.72E+01	3.23E-01	2.72E+00	2.02E+01	1.04E+00	1.68E-01	4.84E+00	5.38E-01	-4.82E+00
Water deprivation potential	eq. m^3	2.57E-01	1.56E-03	3.05E-02	2.89E-01	1.95E-02	8.00E-04	6.79E-02	7.54E-03	-6.66E-02

Table 9. Life cycle assessment (LCA) results of the 1 kg of the averaged **wet** decorative finishing products CAMELEO DECO COATINGS , CRAFTCLAY CLAY COATINGS, CEMMENTAL HYBRID COATINGS manufactured by Cameleo Sp. J.

Indicator	Unit	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
Particulate matter	disease incidence	3.18E-08	1.85E-09	1.85E-09	3.55E-08	1.07E-09	8.13E-10	7.67E-09	8.52E-10	-7.62E-09
Potential human exposure efficiency relative to U235	eg. kBq U235	5.64E-02	4.10E-04	3.94E-03	6.08E-02	3.21E-03	2.60E-04	1.61E-02	1.79E-03	-1.57E-02
Potential comparative toxic unit for ecosystems	CTUe	1.78E+01	8.67E-02	6.97E-01	1.86E+01	2.63E-01	4.39E-02	1.07E+00	1.19E-01	-1.06E+00
Potential comparative toxic unit for humans (cancer effects)	CTUh	5.35E-09	1.61E-10	3.79E-10	5.89E-09	1.14E-10	7.19E-11	8.01E-10	8.90E-11	-7.97E-10
Potential comparative toxic unit for humans (non-cancer effects)	CTUh	1.06E-08	2.08E-10	2.77E-09	1.36E-08	1.23E-09	1.01E-10	2.89E-09	3.21E-10	-2.88E-09
Potential soil quality index	dimensionless	2.76E+00	1.92E-01	3.39E-01	3.29E+00	2.41E-01	8.63E-02	9.32E-01	1.04E-01	-9.27E-01

Table 10. Life cycle assessment (LCA) results of the 1 kg of the averaged **wet** decorative finishing products CAMELEO DECO COATINGS , CRAFTCLAY CLAY COATINGS, CEMMENTAL HYBRID COATINGS manufactured by Cameleo Leśniewicz Gradkowska Sp.J.

Indicator	Unit	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
Consumption of renewable primary energy - excluding renewable primary energy sources used as raw materials	MJ	6.47E-01	4.82E-03	1.17E-01	7.69E-01	1.01E-01	2.92E-03	1.72E-01	1.91E-02	-1.68E-01
Consumption of renewable primary energy resources used as raw materials	MJ	1.25E-01	6.00E-05	1.31E-02	1.38E-01	1.12E-02	3.10E-04	4.68E-02	5.20E-03	-4.66E-02
Total consumption of renewable primary energy resources	MJ	7.72E-01	5.48E-03	1.30E-01	9.07E-01	1.12E-01	3.23E-03	2.18E-01	2.43E-02	-2.14E-01
Consumption of non-renewable primary energy - excluding renewable primary energy sources used as raw materials	MJ	1.61E+01	2.93E-01	2.61E+00	1.90E+01	1.03E+00	1.52E-01	4.49E+00	4.99E-01	-4.47E+00
Consumption of non-renewable primary energy resources used as raw materials	MJ	1.12E+00	3.01E-02	1.14E-01	1.26E+00	9.60E-03	1.56E-02	3.50E-01	3.89E-02	-3.49E-01
Total consumption of non-renewable primary energy resources	MJ	1.72E+01	3.23E-01	2.72E+00	2.02E+01	1.04E+00	1.68E-01	4.84E+00	5.38E-01	-4.82E+00
Consumption of secondary materials	kg	3.43E-02	3.60E-04	8.22E-03	4.29E-02	6.93E-03	2.10E-04	9.45E-03	1.05E-03	-9.20E-03
Consumption of renew. secondary fuels	MJ	1.69E-02	3.60E-04	4.57E-03	2.18E-02	4.00E-03	7.03E-05	4.42E-03	4.90E-04	-4.27E-03
Consumption of non-renewable secondary fuels	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
Net consumption of freshwater	m^3	7.35E-03	4.29E-05	3.14E-03	1.05E-02	2.69E-03	2.27E-05	2.02E-03	2.20E-04	-1.98E-03

Table 11. Life cycle assessment (LCA) results of the 1 kg of the averaged **wet** decorative finishing products CAMELEO DECO COATINGS , CRAFTCLAY CLAY COATINGS, CEMMENTAL HYBRID COATINGS manufactured by Cameleo Leśniewicz Gradkowska Sp.J.

Indicator	Unit	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
Hazardous waste	kg	3.57E-02	3.51E-03	5.44E-03	4.47E-02	3.72E-03	1.50E-04	7.00E-03	7.80E-04	-6.97E-03
Non-hazardous waste	kg	5.69E-01	1.03E-07	1.41E-01	7.10E-01	8.79E-03	1.87E-03	6.53E-02	7.25E-03	-6.48E-02
Radioactive waste	kg	1.44E-05	0.00E+00	9.68E-07	1.54E-05	7.91E-07	6.41E-08	4.10E-06	4.55E-07	-3.99E-06
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
Materials for recycling	kg	3.17E-02	3.30E-04	7.92E-03	4.00E-02	6.71E-03	1.90E-04	8.52E-03	9.50E-04	-8.28E-03
Materials for energy recovery	kg	7.57E-06	4.58E-08	2.05E-06	9.67E-06	1.80E-06	3.16E-08	1.98E-06	2.20E-07	-1.92E-06
Exported Energy	MJ	9.18E-03	5.43E-05	9.15E-05	9.33E-03	2.95E-05	3.61E-05	2.39E-03	2.70E-04	-2.32E-03

Verification

The process of verification of this EPD is in accordance with ISO 14025. After verification, this EPD is valid for a 5-year-period. EPD does not have to be recalculated after 5 years, if the underlying data have not changed significantly.

The basis for LCA analysis was EN 15804 + A2 and ITB PCR A
Independent verification corresponding to ISO 14025 (subclause 8.1.3) [x] external [ ] internal
External verification of EPD: Halina Prejzner, PhD Eng Verification of LCA: Michał Piasecki, PhD, D.Sc. Eng

Note 1: The declaration owner has the sole ownership, liability and responsibility for the information provided and contained in EPD. Declarations within the same product category but from different programs may not be comparable. Declarations of construction products may not be comparable if they do not comply with EN 15804 + A2. For further information about comparability, see EN 15804 + A2 and ISO 14025. Depending on the application, a corresponding conversion factor such as the specific weight per surface area must be taken into consideration.

Note 2: ITB is a public Research Organization and Notified Body (EC Reg. no 1488) to the European Commission and to other Member States of the European Union designated for the tasks concerning the assessment of building products' performance. ITB acts as the independent, third-party verification organization (17065/17025 certified). ITB-EPD program is recognized and registered member of The European Platform – Association of EPD program operators and ITB-EPD declarations are registered and stored in the international ECO-PORTAL.

Note 3: EPDs may not be comparable if they have not been developed in accordance with EN 15804+A2, the same PCR and the same generic data

Normative references

- ITB PCR A General Product Category Rules for Construction Products (v 1.6)
- ISO 14044:2006 Environmental management – Life cycle assessment – Requirements and guidelines
- EN 15804:2012+A2:2019 Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products
- KOBiZE Wskaźniki emisyjności CO2, SO2, NOx, CO i pyłu całkowitego dla energii elektrycznej. December 2021
- EN 15824:2009 Specifications for external renders and internal plasters based on organic binders
- https://ecoinvent.org

LCA,LCI, input data verification
Michał Piasecki, PhD. D.Sc.
/ Qualified electronic signature/

Head of Thermal Physic, Acoustic and Environment Department
Agnieszka Winkler-Skalna, PhD.
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ŚWIADECTWO nr 823/2025
DEKLARACJI ŚRODOWISKOWEJ III TYPU

Wyroby:

Pokrycia CAMELEO Deco

Wnioskodawca:

Cameleo Leśniewicz Gradkowska sp.j.
ul. Sikorskiego 139, 63-100 Psarskie, Polska

potwierdza się poprawność ustalenia danych uwzględnionych przy opracowaniu Deklaracji Środowiskowej III typu oraz zgodność z wymaganiami normy

EN 15804+A2

Zrównoważenie obiektów budowlanych.
Deklaracje środowiskowe wyrobów.
Podstawowe zasady kategoryzacji wyrobów budowlanych.

Niniejsze świadectwo, wydane 18 lipca 2025 r. jest ważne 5 lat,
lub do czasu zmiany wymienionej Deklaracji Środowiskowej

Kierownik
Zakładu Fizyki Cieplnej,
Akustyki i Środowiska
dr inż. Agnieszka Winkler-Skalna

INSTYTUT TECHNIKI BUDOWLANEJ

Zastępca Dyrektora
ds. Badań i Innowacji
dr inż. Krzysztof Kuczyński

Warszawa, lipiec 2025 r.

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00-611 Warsaw, Filtrowa 1

Thermal Physics, Acoustics and Environment Department
02-656 Warsaw, Ksawerów 21

CERTIFICATE № 823/2025
of TYPE III ENVIRONMENTAL DECLARATION

Products:

CAMELEO Deco Coatings

Manufacturer:

Cameleo Leśniewicz Gradkowska sp.j.
Sikorskiego 139, 63-100 Psarskie, Poland

confirms the correctness of the data included in the development of
Type III Environmental Declaration and accordance with the requirements of the standard

EN 15804+A2

Sustainability of construction works.
Environmental product declarations.
Core rules for the product category of construction products.

This certificate, issued on 18th July 2025 is valid for 5 years
or until amendment of mentioned Environmental Declaration

Head of the Thermal Physic, Acoustics and Environment Department
Agnieszka Winkler-Skalna, PhD

INSTYTUT TECHNIKI BUDOWLANEJ

Deputy Director for Research and Innovation
Krzysztof Kuczyński, PhD

Warsaw, July 2025