ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025 / ISO 21930

Tikkurila

Akrostop	Luja 20	Remontti-Ässä
Argentum Plus 7	Luja 40	Siro 2
Argentum Plus 20	Luja Moisture Stop	Siro 7
Ässä 3	Luja Yleispohjamaali	Siro 12
Ässä 7	Nova 2	Siro 20
Ässä 20	Nova 7	Tapettipohjamaali
Harmony	Nova 7+	Varma
Joker	Nova 12	Ykköspohja
Luja 7	Nova 20	

Alcro

Milltex Prestanda 7	Tät Grundfärg

Beckers

Living Väggfärg 10	Scotte GT 7	Scotte GT 10
Våtrumsgrund	Scotte GT 7+	

Vivacolor

Acrylate Matt	Wall 4	Wall 12
Primer 1	Wall 7	Wall 20

EPD HUB, HUB-0827
Publishing date 7 November 2023, last updated on 7 November 2023, valid until 7 November 2028.

Created with One Click LCA

GENERAL INFORMATION

MANUFACTURER

Manufacturer	PPG Tikkurila
Address	Heidehofintie 2, 01300 Vantaa, Finland
Contact details	Sustainability.COE@ppg.com
Website	https://tikkurilagroup.com/

EPD STANDARDS, SCOPE AND VERIFICATION

Program operator	EPD Hub, hub@epdhub.com
Reference standard	EN 15804+A2:2019 and ISO 14025
PCR	EPD Hub Core PCR version 1.0, 1 Feb 2022
Sector	Construction product
Category of EPD	Third party verified EPD
Scope of the EPD	Cradle to gate with options, A4-A5, and modules C1-C4, D
EPD author	Kristjan Saul
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal certification ☑ External verification
EPD verifier	Magaly González Vázquez, as an authorized verifier acting for EPD Hub Limited

The manufacturer has the sole ownership, liability, and responsibility for the EPD. EPDs within the same product category but from different programs may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804 and if they are not compared in a building context.

PRODUCTS

Representative product name	**Joker**
Other products covered by EPD	Acrylate Matt, Akrostop, Argentum Plus 7, Argentum Plus 20, Harmony, Living Väggfärg 10, Luja 7, Luja 20, Luja 40, Luja Moisture Stop, Luja Yleispohjamaali, Milltex Prestanda 7, Nova 2, Nova 7, Nova 7+, Nova 12, Nova 20, Primer 1, Remontti-Ässä, Scotte GT 7, Scotte GT 7+, Scotte GT 10, Siro 2, Siro 7, Siro 12, Siro 20, Tapettipohjamaali, Tät Grundfärg, Varma, Våtrumsgrund, Wall 4, Wall 7, Wall 12, Wall 20, Ykköspohja, Ässä 3, Ässä 7, Ässä 20
Place of production	Vantaa facility, Finland
Period for data	Calendar year 2022
Averaging in EPD	Multiple products
Variation in GWP-fossil for A1-A3	46 %

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 litre
Declared unit mass	1.34 kg
GWP-fossil, A1-A3 (kgCO2e)	2,83
GWP-total, A1-A3 (kgCO2e)	2,83
Secondary material, inputs (%)	0.724
Secondary material, outputs (%)	0.0
Total energy use, A1-A3 (kWh)	7.85
Total water use, A1-A3 (m3e)	0,0315

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Tikkurila offers a broad range of decorative paints for consumers and professionals for surface protection and decoration. The product offerings include, among others, interior paints, lacquers and effect products, exterior products for wood, mineral, and metal surfaces, as well as services related to painting. In addition, Tikkurila produces paints and coatings for the metal and wood industries.

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass- %	Material origin
Metals	0%	-
Minerals	35%	EU, UK, US
Fossil materials	23%	EU, UK
Bio-based materials	0%	-
Water	42%	EU, UK

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	0
Biogenic carbon content in packaging, kg C	0.0201

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 litre
Mass per declared unit	1.34 kg
Functional unit	-
Reference service life	-

SUBSTANCES, REACH - VERY HIGH CONCERN

The product does not contain any REACH SVHC substances in amounts greater than 0,1 % (1000 ppm).

PRODUCT DESCRIPTIONS

Tikkurila

Joker is a solvent-free, wash resistant matt paint which creates surfaces with a silky effect.
It is intended for painting interior walls and ceilings in living rooms, bedrooms and children's rooms as well as entrance halls, kitchens and similar dry premises.
The product is suitable for plaster, concrete, filler-treated, brick, cardboard, wood surfaces, cardboard-covered plasterboard, chipboard and wood fiberboard. Suitable for both new and previously painted surfaces. Not suitable for painting doors and furniture.

Akrostop is a water-borne acrylate sealing primer for interior walls and ceilings. It prevents bleeding caused by nicotine, soot, liquid drawing ink and dried water stains.
The product is suitable for priming new and previously painted concrete, plaster, brick, filler, chipboard, cardboard-covered gypsum board, wood, paneled, log and woodfiber board surfaces. (Not suitable for painting iron or steel surfaces. Does not prevent the bleeding of wood extractives.)

Argentum Plus 7 is a waterborne matt special topcoat for interior walls and ceilings that contains silver phosphate glass which protects the painted surface from growth of viruses and bacteria. It withstands heavy wear in demanding conditions and can be cleaned with commonly used hospital detergents and disinfectants.
It is intended for painting walls and ceilings in dry and wet premises in which the surface is expected to have excellent wear resistance and a high level of hygiene. For example lobbies, staircases, hospital corridors,

patient rooms and other facilities in which the surfaces are under major stress.
The product is suitable for painting on concrete, plaster, filler, bricks and other common building boards. Suitable for both first application and maintenance painting.

Argentum Plus 20 is a waterborne semi-matt special topcoat for interior walls and ceilings that contains silver phosphate glass which protects the painted surface from growth of viruses and bacteria. It withstands heavy wear in demanding conditions and can be cleaned with commonly used hospital detergents and disinfectants.
It is intended for painting walls and ceilings in dry and wet premises in which the surface is expected to have excellent wear resistance and a high level of hygiene. For example lobbies, staircases, hospital corridors, patient rooms and other facilities in which the surfaces are under major stress.
The product is suitable for painting on concrete, plaster, filler, bricks and other common building boards. Suitable for both first application and maintenance painting.

Harmony is a sophisticated full-matt interior paint, which creates surfaces with a velvet effect.
It is intended for painting walls and ceilings in living rooms, bedrooms and children's rooms, as well as other similar dry spaces.
The product is suitable for plaster, concrete, filler-treated, brick, cardboard, wood surfaces, cardboard-covered plasterboard, chipboard and wood fiberboard. Suitable for both new and previously painted surfaces. Not suitable for painting doors or furniture.

Luja 7 is an extra durable matt special acrylic paint that contains an anti-mold agent which protects the paint film and makes it suitable for rooms with high humidity.
It is intended for painting walls and ceilings in spaces in which high wash and wear resistance is required, such as kitchens, halls or stairwells. Also public premises such as lobbies, hospital corridors, patient rooms and other areas which are subjected to higher-than-normal stress.
The product is suitable for painting interior concrete, plaster, filler-treated, brick, chipboard, plasterboard and wood fiberboard surfaces. Suitable for both new and previously painted surfaces. Also suitable for bathroom panel ceilings when the surface is primed with Multistop isolating primer, and for food processing premises (e.g., dairies, bakeries).

Luja 20 is an extra durable semi-matt special acrylic paint that contains an anti-mold agent which protects the paint film and makes it suitable for rooms with high humidity.
It is intended for painting walls and ceilings in spaces in which high wash and wear resistance is required, such as kitchens, halls or stairwells. Also public premises such as lobbies, hospital corridors, patient rooms and other areas which are subjected to higher-than-normal stress.
The product is suitable for painting interior concrete, plaster, filler-treated, brick, chipboard, plasterboard and wood fiberboard surfaces. Suitable for both new and previously painted surfaces. Also suitable for bathroom panel ceilings when the surface is primed with Multistop isolating primer, and for food processing premises (e.g., dairies, bakeries).

Luja 40 is an extra durable semi-gloss special acrylic paint that contains an anti-mold agent which protects the paint film and makes it suitable for rooms with high humidity.
It is intended for painting walls and ceilings in spaces in which high wash and wear resistance is required, such as kitchens, halls or stairwells. Also public premises such as lobbies, hospital corridors, patient rooms and other areas which are subjected to higher-than-normal stress.
The product is suitable for painting interior concrete, plaster, filler-treated, brick, chipboard, plasterboard and wood fiberboard surfaces. Suitable for both new and previously painted surfaces. Also suitable for bathroom panel ceilings when the surface is primed with Multistop isolating primer, and for food processing premises (e.g., dairies, bakeries).

Luja Moisture Stop is a moisture barrier for wet rooms and dry premises.
It is intended for priming interior walls and ceilings.
The product is suitable for priming interior surfaces treated with Tikkurila Presto LV or Prestonit V, different types of wallboards, fiberglass wallpaper, etc.

Luja Yleispohjamaali is a high-quality acrylic primer that contains an anti-mold agent which protects the paintwork.
It is intended for interior walls and ceilings.
The product is suitable for priming concrete, plaster, filler-treated, brick, cardboard, chipboard, gypsum board and woodfiber board surfaces. Also adheres well to previously painted clean dispersion, alkyd, epoxy and acid-cured paint surfaces. Suitable as a primer for Luja finishing paints, Tikkurila interior acrylic paints, and under wallpapers.

Nova 2 is a water-borne, solvent-free, full-matt dispersion paint for professional interior priming, and painting of ceilings.
It is intended for walls and ceilings in dry interior spaces.
The product is suitable for painting of concrete, plaster, filler, plasterboard, chipboard, and wood fiberboard surfaces according to instructions.

Nova 7 is a water-borne, solvent-free, matt dispersion paint for professional interior painting with a very low side sheen.
It is intended for walls and ceilings in dry interior spaces; e.g. living spaces, kitchens, offices, and light use public spaces.
The product is suitable for first application and maintenance painting of concrete, plaster, filler, plasterboard, chipboard, and wood fiberboard surfaces according to instructions.

Nova 7+ is a water-borne, solvent-free, matt acrylate paint for professional interior painting.
It is intended for walls and ceilings in dry interior premises in public buildings that are subject to heavy stress.
The product is suitable for first application and maintenance painting of concrete, plaster, filler, plasterboard, chipboard, and wood fiberboard surfaces according to instructions.

Nova 12 is a water-borne, solvent-free, semi-matt dispersion paint for professional interior painting.
It is intended for walls and ceilings in dry interior spaces; e.g. living spaces, kitchens, offices, and light use public spaces.
The product is suitable for first application and maintenance painting of concrete, plaster, filler, plasterboard, chipboard, and wood fiberboard surfaces according to instructions.

Nova 20 is a water-borne, solvent-free, semi-matt dispersion paint for professional interior painting.
It is intended for walls and ceilings in dry interior spaces; e.g. living spaces, kitchens, offices, and light use public spaces.
The product is suitable for first application and maintenance painting of concrete, plaster, filler, plasterboard, chipboard, and wood fiberboard surfaces according to instructions.

Remontti-Ässä is an extra durable, semi-matt renovation paint.
It is intended for painting interior walls and ceilings, especially in spaces that require frequent washing, such as kitchens, entrance halls and stairwells.
The product is suitable for plaster, concrete, filler-treated, brick, cardboard, wood surfaces, cardboard-covered plasterboard, chipboard and wood fiberboard. Suitable for both new and previously painted surfaces. Not suitable for painting doors and furniture.

Siro 2 is a water-borne, full-matt interior primer and ceiling paint, intended for walls and ceilings in dry interior premises.
The product is suitable for painting of concrete, plaster, filler, plasterboard and wood fiberboard surfaces according to instructions.

Siro 7 is a water-borne, matt interior paint with very low side sheen.
It is intended for walls and ceilings in dry interior premises, e.g. living rooms, kitchens, offices and public spaces exposed to light wear.
The product is suitable for first application and maintenance painting of concrete, plaster, filler, plasterboard, chipboard, and wood fiberboard surfaces according to instructions.

Siro 12 is a water-borne, semi-matt interior paint.
It is intended for walls and ceilings in dry interior premises, e.g. living rooms, kitchens, offices and public spaces exposed to light wear.
The product is suitable for first application and maintenance painting of concrete, plaster, filler, plasterboard, chipboard, and wood fiberboard surfaces according to instructions.

Siro 20 is a water-borne, semi-matt interior renovation paint.
It is intended for walls and ceilings in dry interior premises, e.g. living rooms, kitchens, offices and public spaces exposed to light wear.
The product is suitable for first application and maintenance painting of concrete, plaster, filler, plasterboard, chipboard, and wood fiberboard surfaces according to instructions.

Tapettipohjamaali is an acrylic primer for interior use. Due to good water resistance, it is suitable for priming before wallpapering.
The product is suitable for priming of plaster, concrete, filler treated, gypsum, chipboard and wood fiber board surfaces before applying wallpapers. Please note that the filler substrate must be made with a suitable Presto ready-to-use filler or cement reinforced dry filler, which do not easily dissolve in water.

Varma is an interior primer with good adhesion properties. It evens the absorbency of the surface and reduces topcoat consumption.
It is intended for walls and ceilings in dry interior premises.
The product is suitable for the priming of plaster, concrete, filler treated, gypsum, chipboard and wood fiber board surfaces. Recommended especially as a primer for Harmony, Joker, and Remontti-Ässä. Suitable for new and previously painted surfaces.

Ykköspohja is a dispersion primer intended for walls and ceilings in premises where surfaces may be subjected to high mechanical stresses. For example, kitchens, commercial premises, classrooms, patient rooms, stairwells and public spaces.
The product is suitable for interior painting of concrete, plaster, filler-treated, brick, cardboard, chipboard, plasterboard and wood fiberboard surfaces according to instructions. Adheres well to galvanized surfaces.

Ässä 3 is a water-borne, full-matt acrylate wall and ceiling renovation paint designed specially for surfaces subject to hard wear.
It is intended for walls and ceilings in dry interior premises in public buildings.
The product is suitable for new and previously painted treated plaster, concrete, filler-treated, chipboard, plasterboard and wood fiberboard surfaces.

Ässä 7 is a water-borne, matt acrylate wall and ceiling renovation paint designed specially for surfaces subject to hard wear.
It is intended for walls and ceilings in dry interior premises in public buildings.
The product is suitable for new and previously painted treated plaster, concrete, filler-treated, chipboard, plasterboard and wood fiberboard surfaces.

Ässä 20 is a water-borne, semi-matt acrylate wall and ceiling renovation paint designed specially for surfaces subject to hard wear.
It is intended for walls and ceilings in dry interior premises in public buildings.
The product is suitable for new and previously painted treated plaster, concrete, filler-treated, chipboard, plasterboard and wood fiberboard surfaces.

Alcro

Milltex Prestanda 7 is a matt primer and topcoat for indoor painting of walls and ceilings, specially developed for the professional painter. It has extra high hiding power and can be used in two coats without priming.
The paint is well suited for spaces that require a durable and hard-wearing surface. It has high chemical resistance and meets washability class 1 EN13300.
The product is used for painting plaster, concrete, gypsum boards, wood fiber boards, wallpaper and fabric.

Tät Grundfärg is a water-borne combination of primer and fabric adhesive for wet areas. It adheres well to the substrate and provides a waterproof layer against water and moisture.

Beckers

Scotte GT 7 is a matte acrylate paint of a very high technical level. The paint has a high covering capacity, high chemical resistance and gives a washable surface. Thanks to the hard-wearing properties of the paint, it is advantageously used in exposed areas such as corridors, stairwells, receptions and other public areas in schools, hospitals etc.

Scotte GT 7+ is a matt acrylate interior paint. The paint has excellent coverage in combination with low emissions and it is intended for painting walls and ceilings in living rooms and bedrooms as well as entrance halls, kitchens, and similar dry premises.
The product is well suited for painting plaster, concrete, filler-treated, brick, cardboard, wood, cardboard-covered, plasterboard, chipboard, and wood fiberboard surfaces. Scotte GT 7+ also adheres well to previously painted surfaces making it an excellent option for a repair paint.

Scotte GT 10 is a matt acrylate paint of a very high technical level. The paint has a high coverage, high chemical resistance and gives a washable surface. Thanks to the hard-wearing properties of the paint, it is well suited for use in exposed areas such as corridors, stairwells, receptions and other public areas in schools, hospitals etc.

Living Väggfärg 10 is a matt waterborne acrylate paint with high coverage. It provides a washable surface with a low, soft texture. The silky matt surface is perfect for the living room, hall, bedroom, etc.

Våtrumsgrund is a primer that seals and protects walls from water and moisture, and creates a glossy surface that is easy to clean.
It is intended for use on surfaces that are subject to frequent wetting or frequent wet scrubbing, such as showers, bathrooms and laundries.
The product is used to seal, bind and primer plasterboards, plaster and concrete.

Vivacolor

Acrylate Matt is a water-borne, matt paint for interior applications which has excellent adhesion to previously painted surfaces and leaves an even finish. It has an exceptionally good wet scrub resistance and is therefore most suitable for places where high durability is needed.
It is intended for walls and ceilings in dry premises (living rooms, hallways, kitchens, storage rooms, schools, industrial facilities, public premises, etc.).
The product is suitable for new and previously painted gypsum boards, filler-treated, concrete, brick and wallpapered surfaces.

Primer 1 is a water-borne, full-matt primer for interior use. Product forms a uniform and smooth surface for the topcoat and reduces its consumption. It has good adhesion to different substrates and is also perfect for priming surfaces before wallpapering.
It is intended for walls and ceilings in dry and wet premises (kitchens, bathrooms, living rooms, hallways, offices, industrial premises, warehouses, public premises)
The product is suitable for new and previously painted concrete, plaster, brick, filler or wallpapered surfaces; plaster blocks; fibreboard, plasterboard surfaces.

Wall 4 is a water-borne, full-matt, easily cleanable paint for interior applications. It leaves a smooth full-matt surface which helps hide small imperfections and gives a flawless velvety result.
It is intended for walls and ceilings in dry premises (bedrooms, children's rooms, living rooms, offices, schools, kindergartens and other public premises)
The product is suitable for new and previously painted gypsum boards, filler-treated and wallpapered surfaces.

Wall 7 is a water-borne, matt, washable paint for interior use with good adhesion and very good hiding power. It is easy to apply, and it leaves an even painted surface.
It is intended for walls and ceilings in dry premises (bedrooms, children's rooms, living rooms, halls, offices, residential buildings and public premises).
The product is suitable for new and previously painted concrete, plaster-treated, brick, filler-treated or wallpapered surfaces; plaster blocks; primed fibreboard, plasterboard surfaces.

Wall 12 is a water-borne, semi-matt, washable paint for interior use. It has very good adhesion, excellent leveling, and it gives painted surfaces good wear and tear resistance.
It is intended for walls and ceilings in dry premises (bedrooms, children's rooms, living rooms, halls, offices, residential buildings and public premises)
The product is suitable for new and previously painted concrete, plaster-treated, brick, filler-treated or wallpapered surfaces; plaster blocks; primed fibreboard, cardboard surfaces.

Wall 20 is a water-borne, semi-matt, washable paint for interior applications. It is perfect to use in rooms where good wear and tear or moisture resistance is needed. Surfaces painted with Wall 20 resist stains and are washable without color fade.
It is intended for walls and ceilings in dry and damp premises (children's rooms, living rooms, halls, kitchens, storages, offices, schools, kindergartens and other public premises).
The product is suitable for painting new and previously painted concrete, plaster-treated, brick, filler-treated or wallpapered surfaces, plaster blocks, gypsum boards, primed fiberboard and cardboard surfaces.

Further information can be found at:
https://tikkurila.com/
https://alcro.dk/
https://alcro.no/
https://alcro.se/
https://beckers.dk/
https://beckers.no/
https://beckers.se/
https://vivacolor.ee/

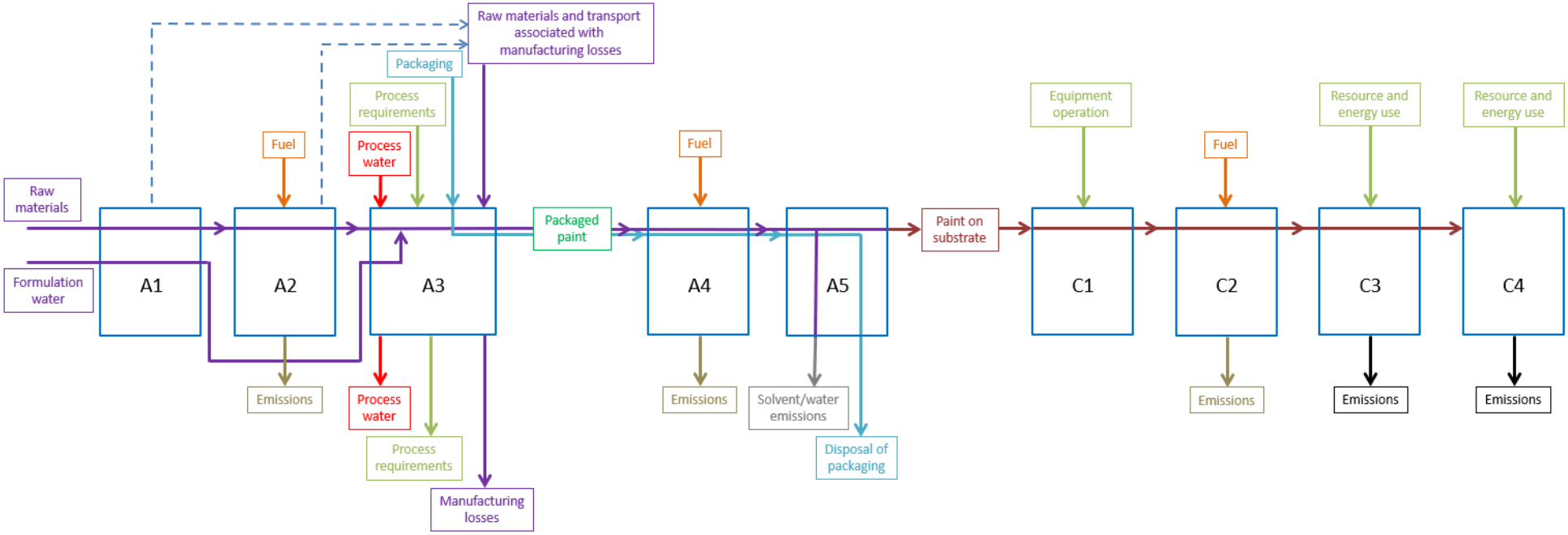
PRODUCT LIFE-CYCLE

SYSTEM BOUNDARY

This EPD covers the life-cycle modules listed in the following table. *Modules not declared = MND. Modules not relevant = MNR.*

Product stage			Assembly stage		Use stage							End of life stage				Beyond the system boundaries
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction Demolition	Transport	Waste processing	Disposal	Reuse Recovery Recycling
✓	✓	✓	✓	✓	MND	MND	MND	MND	MND	MND	MND	✓	✓	✓	✓	✓

LIFE-CYCLE STAGES DIAGRAM



MANUFACTURING AND PACKAGING (A1-A3)

The environmental impacts considered for the product stage cover the manufacturing of raw materials used in the production as well as packaging materials and other ancillary materials. Also, fuels used by machines, and handling of waste formed in the production processes at the manufacturing facilities are included in this stage. The study also considers the material losses occurring during the manufacturing processes as well as losses during electricity transmission.

The paint production process at the manufacturing facility consists of several separate steps. In the initial step water, powders, and additives are mixed together and then dispersed to a homogeneous paste. The following step is the let-down stage: binders, water, additives, etc. are mixed with the paste to obtain a ready-to-use paint. At the next stage, compliance of the product with specified quality parameters is checked. In the packaging stage, paint is filled into cans of various sizes on filling machines, loaded onto pallets by robots, and transferred to the warehouse. Eventually, the paint is transported to retailers and construction sites.

TRANSPORT AND INSTALLATION (A4-A5)

Transportation impacts occurred from final products delivery to construction site cover fuel direct exhaust emissions, environmental impacts of fuel production, as well as related infrastructure emissions.

The transportation distance is defined according to EPD Hub PCR. Average distance of transportation from production plant to building site is assumed to be 179 km and the transportation method is assumed to be lorry. Transportation does not cause losses as products are packaged properly.

PRODUCT USE AND MAINTENANCE (B1-B7)

This EPD does not cover the use phase.
Air, soil, and water impacts during the use phase have not been studied.

PRODUCT END OF LIFE (C1-C4, D)

Paint is usually not removed from substrates at end-of life, so the consumption of energy, natural resources, and the impacts of demolition are assumed to be negligible. All of the end-of-life product is assumed to be sent to the closest waste treatment facilities.
Interior products are mostly used on plasterboard substrates.
For plasterboard substrates, it is assumed that 100% of the paint is landfilled along with the waste plasterboard.
The packaging materials (wooden pallets, metal and plastic cans, cardboard, and packaging film) are sent to recycling and have benefits beyond the system boundary.

LIFE-CYCLE ASSESSMENT

CUT-OFF CRITERIA

The study does not exclude any modules or processes which are stated mandatory in the reference standard and the applied PCR. The study does not exclude any hazardous materials or substances. The study includes all major raw material and energy consumption. All inputs and outputs of the unit processes, for which data is available for, are included in the calculation. There is no neglected unit process more than 1% of total mass or energy flows. The module specific total neglected input and output flows also do not exceed 5% of energy usage or mass.

ALLOCATION, ESTIMATES AND ASSUMPTIONS

Allocation is required if some material, energy, and waste data cannot be measured separately for the product under investigation. All allocations are done as per the reference standards and the applied PCR. In this study, allocation has been done in the following ways:

Data type	Allocation
Raw materials	No allocation
Packaging materials	Allocated by mass or volume
Ancillary materials	Allocated by mass or volume
Manufacturing energy and waste	Allocated by mass or volume

AVERAGES AND VARIABILITY

Type of average	Multiple products
Averaging method	Represented by the highest production volume product
Variation in GWP-fossil for A1-A3	46 %

This EPD is made for a representative product with the highest production volume. The variation in GWP-fossil impact for A1-A3 modules among the products is +5% for the highest impact product and -43% for the lowest impact product.

LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator. The LCA and EPD have been prepared according to the reference standards and ISO 14040/14044. Ecoinvent v3.8 and One Click LCA databases were used as sources of environmental data.

ENVIRONMENTAL IMPACT DATA

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP – total[1)]	kg CO_2e	2,15E+00	1,55E-01	5,33E-01	2,83E+00	3,50E-02	1,21E-02	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	-3,38E-03	4,03E-02	-1,21E-01
GWP – fossil	kg CO_2e	2,14E+00	1,55E-01	5,39E-01	2,83E+00	3,50E-02	5,92E-03	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	4,34E-02	-1,24E-01
GWP – biogenic	kg CO_2e	6,58E-03	1,51E-05	-6,20E-03	3,94E-04	0,00E+00	6,13E-03	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	-3,38E-03	-3,12E-03	3,06E-03
GWP – LULUC	kg CO_2e	8,31E-04	8,12E-05	3,28E-04	1,24E-03	1,47E-05	4,96E-06	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	8,46E-06	-1,56E-05
Ozone depletion pot.	kg CFC_{-11}e	1,74E-06	3,47E-08	3,52E-08	1,81E-06	8,29E-09	4,15E-10	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	2,51E-09	-4,35E-09
Acidification potential	mol H^+e	1,77E-02	2,79E-03	2,51E-03	2,30E-02	1,05E-04	1,77E-05	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	7,01E-05	-4,95E-04
EP-freshwater[2)]	kg Pe	1,48E-03	8,15E-07	2,23E-05	1,51E-03	2,66E-07	1,25E-07	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	1,34E-07	-4,50E-06
EP-marine	kg Ne	1,93E-03	6,86E-04	4,87E-04	3,10E-03	2,15E-05	5,72E-06	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	2,38E-05	-9,96E-05
EP-terrestrial	mol Ne	1,95E-02	7,63E-03	5,34E-03	3,24E-02	2,39E-04	4,79E-05	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	2,62E-04	-1,16E-03
POCP ("smog")[3)]	kg NMVOCe	7,92E-03	2,05E-03	1,76E-03	1,17E-02	9,28E-05	3,45E-05	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	8,40E-05	-5,91E-04
ADP-minerals & metals[4)]	kg Sbe	9,19E-06	2,95E-07	3,52E-06	1,30E-05	1,25E-07	7,90E-08	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	2,80E-08	-2,11E-06
ADP-fossil resources	MJ	1,46E+01	2,21E+00	4,94E+00	2,17E+01	5,35E-01	4,11E-02	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	1,92E-01	-1,65E+00
Water use[5)]	m^3e depr.	8,23E-01	8,43E-03	4,77E-01	1,31E+00	2,61E-03	9,29E-04	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	1,14E-03	-2,73E-02

1) GWP = Global Warming Potential
2) EP = Eutrophication potential. Required characterisation method and data are in kg P-eq. Multiply by 3,07 to get PO4e
3) POCP = Photochemical ozone formation
4) ADP = Abiotic depletion potential
5) EN 15804+A2 disclaimer for Abiotic depletion and Water use and optional indicators except Particulate matter and Ionizing radiation, human health. The results of these environmental impact indicators shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.

ADDITIONAL (OPTIONAL) ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Particulate matter	Incidence	7,77E-08	1,12E-08	2,29E-08	1,12E-07	3,19E-09	3,85E-10	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	1,40E-09	-7,66E-09
Ionizing radiation[6)]	kBq U235e	1,44E-01	1,08E-02	2,00E-01	3,55E-01	2,82E-03	4,22E-04	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	9,40E-04	3,39E-03
Ecotoxicity (freshwater)	CTUe	4,66E+01	1,63E+00	1,25E+01	6,08E+01	4,53E-01	2,90E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	6,80E-01	-3,76E+00
Human toxicity, cancer	CTUh	4,89E-08	7,08E-11	1,84E-09	5,08E-08	1,37E-11	8,27E-12	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	6,09E-12	8,83E-10
Human tox. non-cancer	CTUh	3,43E-07	1,43E-09	8,11E-09	3,52E-07	4,46E-10	1,09E-10	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	1,81E-10	-2,61E-09
SQP[7)]	-	1,24E+01	1,53E+00	4,76E+00	1,86E+01	4,64E-01	1,03E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	4,64E-01	-9,08E-01

6) EN 15804+A2 disclaimer for Ionizing radiation, human health. 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
7) SQP = Land use related impacts/soil quality.

USE OF NATURAL RESOURCES

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Renew. PER as energy[8)]	MJ	1,29E+00	2,24E-02	1,23E+00	2,54E+00	7,98E-03	3,68E-03	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	3,53E-03	-2,01E-01
Renew. PER as material	MJ	2,97E-04	0,00E+00	1,00E-01	1,01E-01	0,00E+00	-1,00E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	-1,53E-04	-1,41E-04	-8,10E-02
Total use of renew. PER	MJ	1,29E+00	2,24E-02	1,33E+00	2,64E+00	7,98E-03	-9,68E-02	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	-1,53E-04	3,39E-03	-2,82E-01
Non-re. PER as energy	MJ	1,44E+01	2,21E+00	9,07E+00	2,57E+01	5,35E-01	4,11E-02	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	1,92E-01	-1,27E+00
Non-re. PER as material	MJ	1,07E+00	0,00E+00	6,03E-01	1,68E+00	0,00E+00	-6,13E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	-5,53E-01	-5,10E-01	8,71E-02
Total use of non-re. PER	MJ	1,55E+01	2,21E+00	9,67E+00	2,74E+01	5,35E-01	-5,72E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	-5,53E-01	-3,18E-01	-1,18E+00
Secondary materials	kg	9,70E-03	7,63E-04	5,02E-02	6,07E-02	1,84E-04	8,73E-05	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	6,87E-05	7,29E-02
Renew. secondary fuels	MJ	1,20E-04	4,30E-06	2,66E-03	2,78E-03	1,93E-06	2,53E-06	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	2,64E-06	-9,83E-06
Non-ren. secondary fuels	MJ	0,00E+00	0,00E+00	4,60E-05	4,60E-05	0,00E+00	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m^3	2,41E-02	2,22E-04	7,19E-03	3,15E-02	7,23E-05	2,36E-05	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	2,06E-04	-4,26E-04

8) PER = Primary energy resources.

END OF LIFE – WASTE

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste	kg	3,58E-01	2,57E-03	1,19E-01	4,79E-01	6,29E-04	3,94E-04	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-3,52E-02
Non-hazardous waste	kg	1,13E+01	3,33E-02	8,53E-01	1,22E+01	1,12E-02	9,05E-03	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	7,82E-01	-1,75E-01
Radioactive waste	kg	6,38E-05	1,54E-05	7,50E-05	1,54E-04	3,67E-06	2,45E-07	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,25E-07

END OF LIFE – OUTPUT FLOWS

Impact category	Unit	A1	A2	A3	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	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for recycling	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,60E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for energy rec	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy	MJ	0,00E+00	0,00E+00	7,74E-03	7,74E-03	0,00E+00	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

ENVIRONMENTAL IMPACTS – EN 15804+A1, CML / ISO 21930

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Global Warming Pot.	kg CO_2e	2,09E+00	1,54E-01	5,31E-01	2,77E+00	3,47E-02	7,02E-03	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	3,62E-02	-1,17E-01
Ozone depletion Pot.	kg CFC_{-11}e	2,22E-06	2,75E-08	3,13E-08	2,28E-06	6,57E-09	3,37E-10	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	1,99E-09	-4,78E-09
Acidification	kg SO_2e	1,54E-02	2,23E-03	2,05E-03	1,97E-02	8,54E-05	1,40E-05	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	5,31E-05	-4,01E-04
Eutrophication	kg PO_4^3e	4,52E-03	2,70E-04	9,27E-04	5,72E-03	1,87E-05	2,17E-05	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	1,30E-03	-1,85E-04
POCP (“smog”)	kg C_2H_4e	1,94E-03	6,09E-05	1,49E-04	2,15E-03	4,20E-06	1,14E-06	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	7,03E-06	-6,44E-05
ADP-elements	kg Sbe	1,97E-04	2,88E-07	3,65E-06	2,01E-04	1,22E-07	7,85E-08	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	2,71E-08	-2,11E-06
ADP-fossil	MJ	3,66E+01	2,21E+00	9,45E+00	4,82E+01	5,35E-01	4,11E-02	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	1,92E-01	-1,65E+00

ENVIRONMENTAL IMPACTS – TRACI 2.1. / ISO 21930

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Global Warming Pot.	kg CO_2e	1,08E+00	1,54E-01	5,29E-01	1,77E+00	3,47E-02	6,78E-03	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	3,21E-02	-1,18E-01
Ozone Depletion	kg CFC_{-11}e	1,43E-07	2,75E-08	3,30E-08	2,03E-07	6,57E-09	3,36E-10	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	1,99E-09	-4,77E-09
Acidification	kg SO_2e	4,87E-01	1,28E-01	7,04E-02	6,85E-01	4,69E-03	8,34E-04	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	4,52E-03	-2,23E-02
Eutrophication	kg Ne	4,13E-04	1,21E-04	1,76E-04	7,10E-04	1,25E-05	2,70E-06	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	8,31E-06	-1,71E-05
POCP (“smog”)	kg O_3e	2,83E-03	1,76E-03	1,03E-02	1,49E-02	5,57E-05	1,08E-05	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	6,41E-05	-2,84E-04
ADP-fossil	MJ	1,26E+00	3,09E-01	5,49E-01	2,11E+00	7,36E-02	4,12E-03	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	2,55E-02	-1,49E-01

VERIFICATION STATEMENT

VERIFICATION PROCESS FOR THIS EPD

This EPD has been verified in accordance with ISO 14025 by an independent, third-party verifier by reviewing results, documents and compliancy with reference standard, ISO 14025 and ISO 14040/14044, following the process and checklists of the program operator for:

- This Environmental Product Declaration
- The Life-Cycle Assessment used in this EPD
- The digital background data for this EPD

Why does verification transparency matter? Read more online
This EPD has been generated by One Click LCA EPD generator, which has been verified and approved by the EPD Hub.

THIRD-PARTY VERIFICATION STATEMENT

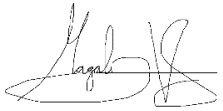
I hereby confirm that, following detailed examination, I have not established any relevant deviations by the studied Environmental Product Declaration (EPD), its LCA and project report, in terms of the data collected and used in the LCA calculations, the way the LCA-based calculations have been carried out, the presentation of environmental data in the EPD, and other additional environmental information, as present with respect to the procedural and methodological requirements in ISO 14025:2010 and reference standard.

I confirm that the company-specific data has been examined as regards plausibility and consistency; the declaration owner is responsible for its factual integrity and legal compliance.

I confirm that I have sufficient knowledge and experience of construction products, this specific product category, the construction industry, relevant standards, and the geographical area of the EPD to carry out this verification.

I confirm my independence in my role as verifier; I have not been involved in the execution of the LCA or in the development of the declaration and have no conflicts of interest regarding this verification.

Magaly González Vázquez, as an authorized verifier acting for EPD Hub Limited
07.11.2023



VERIFIED ISO 14025