# Environmental Product Declaration

In accordance with EN15804:2012+A2:2019/AC:2021 and ISO 14025:2006 for:

## TREND 20 WHITES

from

## TEKNOS GROUP OY

| | |
|---|---|
| Programme: | The International EPD® System, www.environdec.com |
| Programme operator: | EPD International AB |
| EPD registration number: | EPD-IES-0024663 |
| Publication date: | 2025-06-19 |
| Valid until: | 2030-06-19 |

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

EPD of multiple products, based on worst-case life cycle impacts (of each reported life cycle impact category). The products are listed on page 4.

## Programme information

| | |
|---|---|
| **Programme:** | The International EPD® System<br>EPD International AB<br>Box 210 60<br>SE-100 31 Stockholm Sweden<br>www.environdec.com<br>info@environdec.com |

| **Accountabilities for PCR, LCA and independent, third-party verification** |
|---|
| **Product Category Rules (PCR)** |
| CEN standard EN 15804:2012+A2:2019/AC:2021 serves as the Core Product Category Rules (PCR) |
| PCR: *International EPD System, PCR for Construction Products, 2019:14, version 1.3.4.* |
| PCR review was conducted by: The Technical Committee of the International EPD System. See www.environdec.com for a list of members. Review chair: Claudia A. Peña, University of Concepción, Chile. The review panel may be contacted via the Secretariat www.environdec.com/contact |
| **Life Cycle Assessment (LCA)** |
| LCA accountability: Teknos Group Oy |
| **Third-party verification** |
| Independent third-party verification of the declaration and data, according to ISO 14025:2006, via:<br><br>☒ EPD verification by individual verifier<br><br>Third-party verifier: Viktor Hakkarainen, CHM Analytics<br><br>Approved by: The International EPD® System |
| Procedure for follow-up of data during EPD validity involves third-party verifier:<br>☐ Yes ☒ No |

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

Statement: This report records that the LCA based information and the additional information declared in the EPD meets the requirements of the European Standard EN 15804:2012+A2:2019/AC:2021 and PCR 2019:14 v 1.3.4 in alignment with other standards as well GPI 4, ISO 14040, ISO 14044.

EPDs within the same product category but registered in different EPD programmes, or not compliant with EN 15804, 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 characterisation factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.

# Company information

**Owner of the EPD**

Teknos Group Oy, Takkatie 3, FI-00370 Helsinki, Finland, +358 9506091

**Description of the organisation**

Teknos is a global coatings company which offers a wide range of paints and coatings for the manufacturing industry, building professionals and consumers. (Teknos, 2023).

**Name and location of production site**

Teknos Oy Rajamäki

Perämatkuntie 12, 05200

Nurmijärvi, Finland

More information: www.teknos.com

**Author of the life-cycle assessment and declaration**

Kauri Nordström

Tel: +358 457 8203 167

# Product information

| Product Series | Product Name |
|---|---|
| TREND 20 Whites | TREND 20 White Base Paint 1 |
| | TREND 20 T1724 |

## Product description

TREND 20 is a semi-matt, water-borne acrylate dispersion paint for indoor use.

The paint is suitable for use on new and previously painted concrete, plaster, filler, brick and building board surfaces. It is suitable for use on wall and ceiling surfaces that are to be resistant to washing and wear. Not to be used on doors, windows or furniture.

## Product market

Europe (geographical)

## Product application

Before use stir the paint thoroughly. The paint is thinned with water when needed. Apply once or twice by brush, roller or spray.

The surface to be painted has to be dry. During the application and drying period the temperature of the ambient air, the surface and the paint shall be above +5°C and the relative air humidity below 80%.

Good ventilation during the application and drying period quickens the drying process.

## Technical specifications

Theoretical spreading rate: 7-10 m2/l

Drying (23°C/50% RH):

Dry to handle: ½ hours

Fit for sanding and overcoating: 2 hours

Cleaning: Water

## Physical properties of the product

Density (kg/m$^3$): 1300

Colour: Base Paint 1, Off-white T1724 (T1327)

Solid content (%w/w): 38

VOC content (g/L): 30

## Additional technical information

Further information can be found at:

https://www.teknos.com/document/tds/en_0700_15.pdf

## Substances of very high concern

Candidate list of substances of very high concern can be found via ECHA (Candidate List of substances of very high concern for Authorisation, 2023)

*The product contains substances given by the REACH candidate list that are less than 0,1% by weight.

## UN CPC code:

3511 (Paints and varnishes and related products)

## NACE code for product classification:

NACE CODE: C20.30 (Manufacture of paints, varnishes and similar coatings, printing ink and mastics)

## Can sizes

0,9 L – 2,7 L – 9 L – 18 L

# LCA information

## Declared unit:

1 kg of sold TREND 20 WHITE

## Time representativeness:

Production site data was collected in 2025 and is of reference year 2024. Background data is from Ecoinvent v 3.10 and Sphera LCA Database.

## Database(s) and LCA software used:

The CEPE database was used as a basis for the paint raw materials. Specific data for the product composition and raw material amounts have been utilized. Representative data from Ecoinvent v 3.10 and Sphera LCA Database was used for other processes.

| Name | Source | Reference Year |
|---|---|---|
| Raw materials | CEPE RM Database v4 | 2024 |
| Packaging (Steel) | Sphera LCA Database | 2022 |
| Other packaging materials | Ecoinvent 3.10 | 2023 |
| Energy | Ecoinvent 3.10 | 2023 |
| Hazardous paint waste | Ecoinvent 3.10 | 2023 |
| Non-hazardous waste | Sphera LCA Database | 2024 |
| Transport | Ecoinvent 3.10 | 2023 |

## Description of system boundaries:

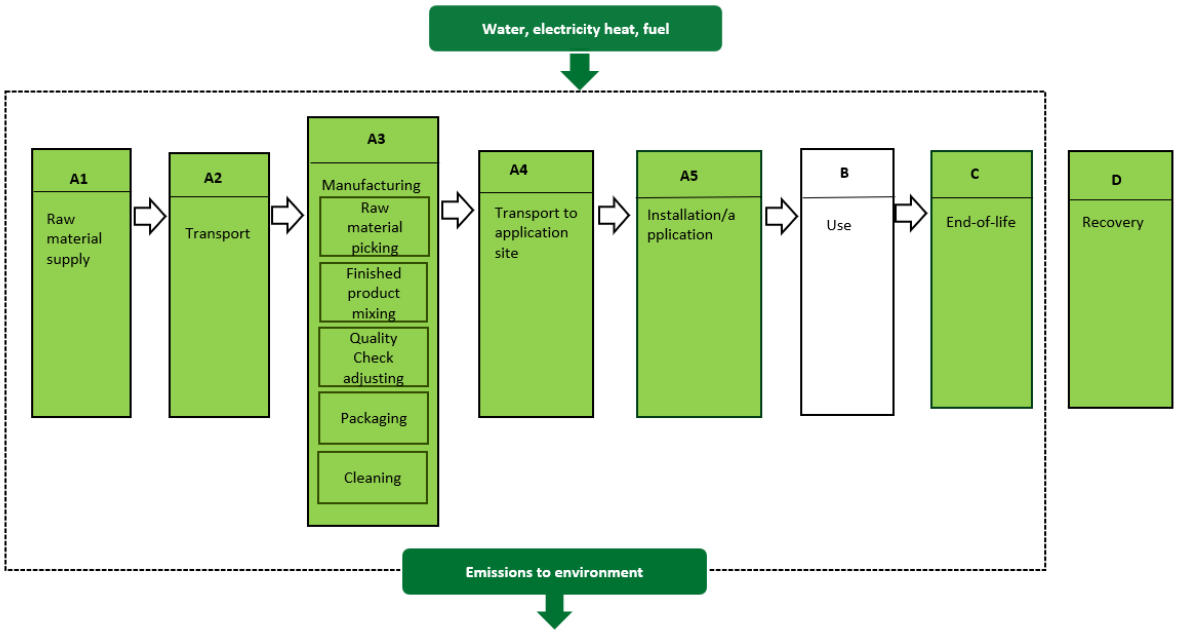
The LCA is a Cradle-to-Gate with options. Major steps from raw material extraction to the end-of-life (final disposal) of the product has been included in the scope of the study. Life cycle stages included are A1-A5, C2, C4 and D. The use stage B is not considered in this study, since no impact are associated with the use stage. Module C1 and C3 are excluded, because there are no dismantling or demolition activities, and no waste processing steps respectively. All impacts associated with the upstream production of materials and energy are included in the system boundaries.

During the use phase, paint products do not consume resources and are not released into the environment. Moreover, painted surfaces do not require maintenance, repair, replacement or refurbishment beyond their normal use, so no impact is considered for modules B1 to B7 and therefore excluded in this assessment.

Regarding the end-of-life stage, the waste processing stage C3 is irrelevant as no further processing is required during the end-of-life of decorative paints since they are disposed together with the substrate where they are applied on and not reused or recycles. Since the efficiency rate cannot be considered higher than 60% it is not included in this assessment.

Module D is included to show the benefits and loads beyond the system boundary from the net output of recovered energy from the product system.

The flowchart in the figure below illustrates the system boundaries for the analysis, in accordance with the modular principle on EN 15804:2012+A2:2019/AC:2021 (European Committee for Standardization , 2021). As can be seen in the figure, module D is out of the system boundary.



# Production process

The following variables have been taken into account during the production phase of the paint: Energy inputs, electricity, production outputs, hazardous and non-hazardous (municipal) waste, wastewater and VOC emissions. After the production of the paints, the products are packaged.

## A1. Raw materials supply

Life cycle stage A1 includes the extraction and processing of raw materials which occur upstream the product manufacturing process, as well as waste processing up to the end-of-waste state.

## A2. Transport of raw materials to manufacturer

Module A2 includes the transport of the raw materials and the transport of paint packaging to the production facility. For the transportation distance, default values were used from the Product Environmental Footprint Category Rules - Decorative Paints document version 1.0 published by Technical Secretariat Decorative Paints from the European Council of the Paint, Printing Ink and Artists' Colours Industry (CEPE) and reviewed in April 2018.

| Raw material and packaging transport | Quantity |
|---|---|
| Type of truck | Transport, freight, lorry, total weight >32t, EUR 4 |
| Raw material transport distance | 460 km |
| Packaging material transport distance | 250 km |
| Capacity | 64% |

## A3. Manufacturing

Life cycle stage (A3) includes all processes linked to the production of paint, including the manufacturing of packaging. Major steps included in the manufacturing of paints are raw material picking, finished product mixing, Quality Check (QC) adjusting, filling off into packaging and cleaning of the tanks and the manufacturing premises. The manufacturing process primarily involves mixing of raw materials to create a homogenous mixture.

Raw materials in paint includes pigments and fillers (which provide color, opacity and gloss control), resins/binders (which dry to form a solid film and adhere the coating to the substrate) additives (which assist with various coating properties and gives it extra desirable characteristics), and finally the solvent mix and all the other ingredients that allow the paint to be applied on any surface.

Waste generated during the production is separated into hazardous and non-hazardous waste and then sent to the external waste treatment facility. Similarly, wastewater generated during the production is collected and sent to the wastewater treatment facility within the paint factory, where paint is separated from water using chemical treatment.

For the paint packaging, average weight for the packaging for 1 kg of paint was obtained based on primary data and further split of the packaging format (except for the steel tinplated) was based on default values from the Product Environmental Footprint Category Rules-Decorative Paints document version 1.0 published by Technical Secretariat Decorative Paints from the European Council of the Paint, Printing Ink and Artists' Colours Industry (CEPE) and reviewed in April 2018. Information regarding packaging weight can be found under **Content Information.**

Primary production data was obtained for the production site Rajamäki, Finland regarding the inputs. Electricity consumed during the manufacturing process is modelled as Finnish Residual mix of different energy source according to GPI 4 rules. All transformation data, transmission network data and energy losses are still as in the original input from Ecoinvent 3.10. Generic data was used for upstream and downstream processes (application, use and waste processing), when no specific data was obtained.

## A4. Transport of Regional Distribution Centre and customer

Life cycle stage A4 includes the transportation downstream from the production facility. For all transportation modes and distances for all produced paint from the production facility to the regional distribution centre (RDC) and final customer/point of sales (PoS), default data was used.

| Coating transport | Factory to RDC | RDC to PoS |
|---|---|---|
| Type of truck | Lorry, total weight >32t | Lorry, total weight>32t |
| Distance | 350 km | 370 km |
| Capacity | 64% | 64% |

## A5. Application

Life cycle stage A5 includes the environmental impacts during application of the coating. Auxiliary materials such as brushes and rollers are not taken into account. Paint loss of 11% is taken into consideration following the Product Environmental Footprint Category Rules- Decorative Paints document version 1.0 published by Technical Secretariat Decorative Paints from the European Council of the Paint, Printing Ink and Artists' Colours Industry (CEPE). Lost paint is treated as non-hazardous waste and landfill process of paint waste has been utilized in the study to represent 100% of paint waste. It is assumed that VOC content is emitted during application. Hence, it is included in this life cycle stage. The end of life of the packaging waste was taken into account and it was assumed that 55% of the packaging waste is landfilled and remaining 45% of the packaging waste is incinerated with energy recovery following the PEFCR- Decorative Paints document version 1.0 published by Technical Secretariat Decorative Paints from the European Council of the Paint, Printing Ink and Artists' Colours Industry (CEPE).

## C2. Transport of waste material

Life cycle stage C2 includes the impacts of the transportation mode and distance to the end-of-life treatment site.

| End-of-life transport | PoS to waste processing |
|---|---|
| Type of truck | Lorry, total weight >32 t |
| Distance | 80 km |
| Capacity | 64% |

## C4. Disposal

Life cycle stage C4 includes the impact of the end-of-life treatment at the disposal site. It is assumed that the water content evaporates during application and the paint together with the substrate is incinerated as hazardous waste.

## D. Benefits and loads beyond the system boundaries

Since 100% of the paint waste is assumed to be landfilled along with the concrete waste and assumed not to be recycled, Module D for this product doesn't have any impacts of benefits and loads beyond the system boundaries. Also, the benefits from the incineration of packaging waste is not considered for this product.

# Allocation

The allocation is made in accordance with EN15804:2012+A2:2019/AC:2021. Mass-based allocation was used for the allocation of energy and water usage for production module A3. There are no co-products in the production of paint products.

# Cut-off criteria

There was no cut-off of raw materials or other inputs or outputs in any stage of the life cycle. Cut-offs in the background processes are according to the respective methodologies (See documentation of the relevant

processes at CEPE processes (Wernet, Bauer, & Steubing, 2016) and EcoInvent processes (Dahlgren , Stripple, Oliveira, & Rydberg , 2016).

There is no neglected unit process of more than 1% of total mass or energy flows. The study excludes primary data on infrastructure/capital goods for upstream and downstream process. Background infrastructure is included as part of the ecoinvent database.

## Data Quality Information

Primary production data was obtained from the production site Rajamäki, Finland regarding the inputs. For the electricity grid mix, the Ecoinvent database was used. Generic data was used for upstream and downstream processes (application, use and waste processing), when no specific data was obtained.

Table below gives further information regarding dataset used for electricity in the manufacturing phase.

| Parameter | Emission factor (kg CO2 eq./kWh) | Dataset | Data quality |
|---|---|---|---|
| A3 Electricity information | 0,66 | FI: Electricity ,medium voltage, residual mix | Electricity mix has been calculated based on Ecoinvent 3.10 database. The impact includes all upstream processes. |

**Modules declared, geographical scope, share of specific data and data variation (X=included, ND= not declared):**

| | 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 and water use | De-constuction, demolition | Transport | Waste processing | Disposal | Reuse-Recovery-Recycling-potential |
| Module | **A1** | **A2** | **A3** | **A4** | **A5** | **B1-B7** | **C1** | **C2** | **C3** | **C4** | **D** |
| Modules declared | X | X | X | X | X | ND | X | X | X | X | X |
| Geography | EU | EU | FI | EU | EU | ND | EU | EU | EU | EU | EU |
| Specific data used | 5 % Note 1 | | | - | - | - | - | - | - | - | - |
| Variation – products | <1 % Note 2 | | | - | - | - | - | - | - | - | - |
| Variation-sites | 0% | | | - | - | - | - | - | - | - | - |

Note 1: Based on GWP-GHG of the energy consumption in module A3 divided by GWP-GHG for stages A1-A3. Data for A3 is specific to Teknos facilities.

Note 2: Variation is defined as the difference between the declared GWP-GHG result (worst-case product) and lowest result(best case product).

# Content information

| Product components | Weight-% | Post consumer material, weight-% | Biogenic material weight-% and kg C / kg |
|---|---|---|---|
| Additives | 0-5 | - | - |
| Solvents | 50-55 | - | - |
| Binders | 20-25 | - | - |
| Pigments | 15-20 | - | - |
| Resins | 5-10 | - | - |
| Total | 100 | - | - |

## Packaging materials

| Packaging materials | Weight (kg) | Weight-% (vs the product) | Weight biogenic carbon kg C/DU |
|---|---|---|---|
| Cardboard | 1,09E-03 | 0,1% | 5,46E-04 |
| Polyethylene film | 1,24E-03 | 0,1% | 0 |
| Polypropylene | 4,87E-02 | 4,9% | 0 |
| Steel tinplated | 8,20E-02 | 8,2% | 0 |
| Wooden pallets | 6,18E-02 | 6,2% | 3,09E-02 |
| Total | 1,95E-01 | 19% | 3,15E-02 |

Note: Default values from Product Environmental Footprint Category Rules-Decorative Paints document version 1.0 has been used for packaging formats except for steel.

## Results of the environmental performance indicators

The estimated impact results are only relative statements, which do not indicate the endpoints of the impact categories, exceeding threshold values, safety margins and/or risks. As stated in the PCR 1.3.4, module C being included in the EPD, the modules (A1-A3) should not be used alone without considering the results of the module C (EPD International, 2024).

The results of the impact categories abiotic depletion of minerals and metals, land use, human toxicity (cancer), human toxicity, noncancer and ecotoxicity (freshwater) may be highly uncertain in LCAs that include capital goods/infrastructure in generic datasets, in case infrastructure/capital goods contribute greatly to the total results. This is because the LCI data of infrastructure/capital goods used to quantify these indicators in currently available generic datasets sometimes lack temporal, technological and geographical representativeness. Caution should be exercised when using the results of these indicators for decision-making purposes.

## Mandatory impact category indicators according to EN 15804+A2 based on EF3.1

| Results per declared unit | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Indicators** | **Unit** | **A1-A3** | **A4** | **A5** | **C1** | **C2** | **C3** | **C4** | **D** | **Variation (A1-A3)** |
| GWP-total | kg CO2 eq. | 2,79E+00 | 1,04E-01 | 1,45E-01 | 0,00E+00 | 3,73E-03 | 0,00E+00 | 1,17E-02 | 0,00E+00 | 3% |
| GWP-fossil | kg CO2 eq. | 2,78E+00 | 9,67E-02 | 6,34E-02 | 0,00E+00 | 3,73E-03 | 0,00E+00 | 2,71E-03 | 0,00E+00 | <1% |
| GWP- biogenic | kg CO2 eq. | -1,44E-03 | 7,56E-03 | 8,12E-02 | 0,00E+00 | 1,94E-06 | 0,00E+00 | 8,97E-03 | 0,00E+00 | 98% |
| GWP- luluc | kg CO2 eq. | 4,01E-03 | 3,17E-05 | 2,96E-06 | 0,00E+00 | 1,28E-06 | 0,00E+00 | 1,40E-06 | 0,00E+00 | 6% |
| ODP | kg CFC-11 eq. | 1,83E-07 | 1,86E-09 | 1,03E-10 | 0,00E+00 | 7,54E-11 | 0,00E+00 | 7,85E-11 | 0,00E+00 | 2% |
| AP | mol H+ eq. | 1,51E-02 | 3,68E-04 | 3,39E-05 | 0,00E+00 | 1,49E-05 | 0,00E+00 | 1,92E-05 | 0,00E+00 | <1% |
| EP-freshwater | kg P eq. | 8,44E-04 | 6,65E-06 | 1,31E-06 | 0,00E+00 | 2,55E-07 | 0,00E+00 | 2,25E-07 | 0,00E+00 | <1% |
| EP-marine | kg N eq. | 2,53E-03 | 1,39E-04 | 3,20E-05 | 0,00E+00 | 5,59E-06 | 0,00E+00 | 7,36E-06 | 0,00E+00 | <1% |
| EP- terrestrial | mol N eq. | 2,59E-02 | 1,50E-03 | 1,51E-04 | 0,00E+00 | 6,07E-05 | 0,00E+00 | 8,00E-05 | 0,00E+00 | <1% |
| POCP | kg NMVOC eq. | 1,17E-02 | 5,80E-04 | 4,91E-05 | 0,00E+00 | 2,35E-05 | 0,00E+00 | 2,87E-05 | 0,00E+00 | <1% |
| ADP-mineral and metals* | kg Sb eq. | 3,49E-05 | 2,49E-07 | 1,13E-08 | 0,00E+00 | 1,01E-08 | 0,00E+00 | 4,24E-09 | 0,00E+00 | 1% |
| ADP- fossil* | MJ | 5,64E+01 | 1,34E+00 | 8,43E-02 | 0,00E+00 | 5,46E-02 | 0,00E+00 | 6,65E-02 | 0,00E+00 | <1% |
| WDP* | $m^3$ | 5,48E+01 | 9,06E-03 | -7,31E-03 | 0,00E+00 | 3,50E-04 | 0,00E+00 | 2,98E-03 | 0,00E+00 | <1% |
| Acronyms | GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption | | | | | | | | | |

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

Variation is defined as the impact indicator results of the worst case product- best case product divided by the worst case product.

## Additional mandatory and voluntary impact indicators

| Results per declared unit | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Indicators** | **Unit** | **A1-A3** | **A4** | **A5** | **C1** | **C2** | **C3** | **C4** | **D** | **Variation (A1-A3)** |
| GWP-GHG[1] | kg $CO_2$ eq. | 2,79E+00 | 9,68E-02 | 6,34E-02 | 0,00E+00 | 3,73E-03 | 0,00E+00 | 2,72E-03 | 0,00E+00 | <1% |
| Particulate matter | Disease incidences | 1,57E-07 | 7,24E-09 | 5,85E-10 | 0,00E+00 | 2,94E-10 | 0,00E+00 | 4,26E-10 | 0,00E+00 | <1% |
| Ionizing radiation, human health (IRP)** | kBq U235 eq. | 2,37E-01 | 1,63E-03 | 8,17E-05 | 0,00E+00 | 6,61E-05 | 0,00E+00 | 4,25E-05 | 0,00E+00 | <1% |
| Eco-toxicity-freshwater (ETP-fw)* | CTUe | 2,70E+01 | 3,38E-01 | 5,49E-02 | 0,00E+00 | 1,29E-02 | 0,00E+00 | 9,19E-03 | 0,00E+00 | 2% |
| Human toxicity, cancer effect (HTP-c)* | CTUh | 7,22E-09 | 5,73E-10 | 4,62E-11 | 0,00E+00 | 2,33E-11 | 0,00E+00 | 1,23E-11 | 0,00E+00 | 2% |
| Human toxicity, non-cancer effects (HTP-nc)* | CTUh | 3,66E-08 | 8,51E-10 | 1,89E-10 | 0,00E+00 | 3,26E-11 | 0,00E+00 | 1,36E-11 | 0,00E+00 | <1% |
| Land use related impacts/soil quality (SQP)* | Pt | 2,22E+01 | 1,34E+00 | 1,21E-01 | 0,00E+00 | 5,47E-02 | 0,00E+00 | 1,31E-01 | 0,00E+00 | <1% |

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

***Disclaimer: 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.*

Variation is defined as the impact indicator results of the worst case product- best case product divided by the worst case product.

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[1]*This indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic $CO_2$ is set to zero.*

## Resource use indicators[2]

| Results per declared unit | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Indicator** | **Unit** | **A1-A3** | **A4** | **A5** | **C1** | **C2** | **C3** | **C4** | **D** | **Variation (A1-A3)** |
| PERE | MJ | 3,63E+00 | 2,14E-02 | 1,28E-03 | 0,00E+00 | 8,66E-04 | 0,00E+00 | 6,24E-04 | 0,00E+00 | <1% |
| PERM | MJ | 1,20E+00 | 0,00E+00 | -2,99E-01 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | <1% |
| PERT | MJ | 4,83E+00 | 2,14E-02 | -2,98E-01 | 0,00E+00 | 8,66E-04 | 0,00E+00 | 6,24E-04 | 0,00E+00 | <1% |
| PENRE | MJ | 5,64E+01 | 1,34E+00 | 8,43E-02 | 0,00E+00 | 5,46E-02 | 0,00E+00 | 6,65E-02 | 0,00E+00 | <1% |
| PENRM | MJ | 7,55E+00 | 0,00E+00 | -7,36E-01 | 0,00E+00 | 0,00E+00 | 0,00E+00 | -9,81E-01 | 0,00E+00 | 3% |
| PENRT | MJ | 6,36E+01 | 1,34E+00 | -6,27E-01 | 0,00E+00 | 5,46E-02 | 0,00E+00 | -8,66E-01 | 0,00E+00 | <1% |
| SM | kg | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | N/A |
| RSF | MJ | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | N/A |
| NRSF | MJ | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | N/A |
| FW | $m^3$ | 1,95E+00 | 2,11E-04 | -1,70E-04 | 0,00E+00 | 8,14E-06 | 0,00E+00 | 6,93E-05 | 0,00E+00 | <1% |
| Acronyms | PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water | | | | | | | | | |

[2]*The primary energy use indicators were calculated according to the PCR2019:14 v 1.3.4 Annex C option B.*

Variation is defined as the impact indicator results of the worst case product- best case product divided by the worst case product.

## Waste indicators

| Results per declared unit | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Parameters | Unit | A1-A3 | A4 | A5 | C1 | C2 | C3 | C4 | D | Variation (A1-A3) |
| Hazardous waste disposed | kg | 6,84E-02 | 1,32E-03 | 6,72E-04 | 0,00E+00 | 5,36E-05 | 0,00E+00 | 4,92E-05 | 0,00E+00 | 4% |
| Non-hazardous waste disposed | kg | 5,21E-03 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | <1% |
| Radioactive waste disposed | kg | 7,60E-06 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | <1% |

Variation is defined as the impact indicator results of the worst case product- best case product divided by the worst case product.

## Output flow indicators

| Results per declared unit | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Indicator | Unit | A1-A3 | A4 | A5 | C1 | C2 | C3 | C4 | D | Variation (A1-A3) |
| 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 | N/A |
| Material for recycling | kg | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | N/A |
| Materials for energy recovery | kg | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | N/A |
| Exported energy, electricity | MJ | 0,00E+00 | 0,00E+00 | 1,45E-01 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 3,23E-01 | 0,00E+00 | N/A |
| Exported energy, thermal | MJ | 0,00E+00 | 0,00E+00 | 2,84E-01 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 6,92E-01 | 0,00E+00 | N/A |

Variation is defined as the impact indicator results of the worst case product- best case product divided by the worst case product.

# Differences versus previous versions

V 1.0: 26.04.2018 (published on RTS platform)

V 1.1: 10.06.2025

- Minor changes to the manufacturing process
- Minor adjustments to the product recipes
- Packaging included in the module A3
- Major changes in the LCA databases values used (Ecoinvent, Sphera)

## Differences in the environmental performance results

Due to the fact that in the previous EPD version, packaging was not considered, the differences in the environmental performance results are not comparable. Also, the V 1.0 used an older EN 15804+A1 standard which used different indicators, such as the single, simplified indicators for Global Warming Potential (GWP) and Eutrophication potential (EP) which are most similar to the GWP-Fossil and EP-freshwater indicators in the updated EN 15804+A2 standard. In addition, the PEFCR for decorative paints did not exist at the time of the V 1.0 of the EPDs, therefore the distance in the module A2 was based on different estimations.

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