





WOODEX



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|---|---|
| Program operator, publisher: | Rakennustietosäätiö RTS Building Information Foundation RTS Malminkatu 16 A 00100 Helsinki http://cer.rts.fi |
| Owner of the declaration: | Teknos Group Oy |
| Name of the product: | WOODEX |
| Registration number: | RTS_227_23 |
| Issue date: | 8.5.2023 |
| Valid to: | 8.5.2028 |
| Scope of the declaration | This environmental product declaration covers the environmental impacts of the WOODEX coatings. The declaration has been prepared in accordance with EN 15804:2019 and ISO 14025 standards and the additional requirements stated in the RTS PCR (English version, 26.8.2020). This declaration covers the life cycle stages from cradle to gate with options (A4 and A5), modules C1–C4, and module D. EPD of construction products may not be comparable if they do not comply with EN15804 and seen in a building context. |
|   |  Jukka Seppänen RTS EPD Committee Secretary  Laura Apilo Managing Director |

Verified according to the requirements of EN 15804:2019 (product group rules)

Independent verification of the declaration and data, according to ISO14025:2010 is

Internal

External

Third party verifier:



8.5.2023

Anni Viitala, Granlund Oy

General information, goal and verification of declaration

1. Owner of the declaration, manufacturer

Teknos Group Oy,
Takkatie 3,
FI-00370 Helsinki, Finland
+358 9 506 0915

2. Product name and number

| Product series | Product name | Color |
|----------------|----------------------|--------------------|
| WOODEX | WOODEX AQUA CLASSIC | Clear |
| | WOODEX AQUA WOOD OIL | Clear, Grey, Brown |
| | WOODEX BIOLEUM | Clear, Brown |
| | WOODEX PREMIUM | Clear |

3. Place of production

Produced in Finland: Rajamäki.

4. Additional technical information

Further information can be found at:

WOODEX AQUA CLASSIC: https://www.teknos.com/document/tds/en_9421_5.pdf

WOODEX AQUA WOOD OIL: https://www.teknos.com/document/tds/en_9481_6.pdf

WOODEX BIOLEUM: https://www.teknos.com/document/tds/WOODEX%20BIOLEUM_952_TDS_en.pdf

WOODEX PREMIUM: https://www.teknos.com/document/tds/en_9510_2.pdf

5. Product Category Rules and the scope of the declaration

The declaration has been prepared in accordance with EN 15804:2019 and ISO 14025 standards and the additional requirements stated in the RTS PCR (English version, 26.8.2020). Geographical representativeness is taken into account by opting for the most representative scenarios available, Finland specifically, and Europe generally.

6. Author of the life-cycle assessment and declaration

Ecomatters B.V.
Weg der Verenigde Naties 1, 3527 KT Utrecht
tel +31 (0) 6 44836384
<https://www.ecomatters.nl/>
Compiler Ecomatters.
Evaluation made according to values in 2023.

7. Verification

The declaration has been prepared in accordance with EN 15804:2019 and ISO 14025 standards and the additional requirements stated in the RTS PCR (English version, 26.8.2020). The declaration was verified by Anni Viitala, Granlund Oy, according to abovementioned standards and PCR rules.

Malminkaari 21, 00701 Helsinki

<https://www.granlund.fi/>

Third party verification on 8.5.2023. Verification is valid 8.5.2023

8. Declaration issue date and validity

Declaration issue date 8.5.2023. The declaration is valid 5 years, 8.5.2023-8.5.2028.

Product information

9. Product description



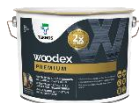
WOODEX AQUA CLASSIC: New wood and wood previously treated with non-film-forming wood stain, e.g. walls, doors, window frames, fences and poles. Recommended especially for log surfaces. Not suitable for use on film-forming wood stains, nor in greenhouses, hotbeds, or shelters for livestock. It is not recommended to use WOODEX AQUA CLASSIC untinted since tinting protects wood from turning grey due to UV radiation of the sun.



WOODEX AQUA WOOD OIL: Natural oil for outdoor use for protection of garden deck floors, jetties and wooden garden furniture. Other suitable objects are fences, trellises, doors and stairs. For untreated, heat-treated and press-impregnated wood. Applied on clean, dry wooden surface by brush, sponge or by dipping. Protects wooden surfaces from moisture, soiling and when tinted from UV radiation of the sun. Diminishes cracking of the wooden surface. Not suitable for greenhouses, hotbeds and shelters for livestock.



WOODEX BIOLEUM: Intended for protection of outdoor decking's and garden furniture. WOODEX BIOLEUM wood oil protects wooden surfaces from moisture, soiling and when tinted from UV radiation of the sun. Reduces cracking of the wooden surfaces and gives a finished appearance.



WOODEX PREMIUM: New and previously with transparent wood stain treated wooden surfaces outdoors, e.g. planked and log walls, weatherboards, doors, window frames and fences. Also suitable for treatment of hardwood and press-impregnated wood.

This EPD represents the highest environmental impacts of the WOODEX AQUA CLASSIC, WOODEX AQUA WOOD OIL, WOODEX BIOLIUM and WOODEX PREMIUM products.

10. Results of environmental information reported per kilogram

WOODEX AQUA CLASSIC

| Environmental Impact Category | Unit | A3 | A1-A3 | A4 | A5 | B1-B7 | C1 | C2 | C3 | C4 | D |
|--|----------------------------|----------|----------|----------|----------|-------|----------|----------|----------|----------|-----------|
| Global Warming Potential total (GWP-total) | kg CO ₂ ekv/kg | 9.90E-01 | 2.55E+00 | 6.63E-02 | 4.66E-01 | NR | 0.00E+00 | 7.23E-03 | 0.00E+00 | 4.27E-01 | -7.01E-02 |
| Abiotic depletion potential for non-fossil resources (ADP-minerals&metals) | kg Sb eq./kg | 6.69E-07 | 1.51E-05 | 1.53E-07 | 9.10E-07 | NR | 0.00E+00 | 1.67E-08 | 0.00E+00 | 2.36E-07 | -4.46E-08 |
| Abiotic depletion for fossil resources potential (ADP-fossil) | MJ. Net calorific value/kg | 1.28E+01 | 4.23E+01 | 1.04E+00 | 2.65E+00 | NR | 0.00E+00 | 1.14E-01 | 0.00E+00 | 2.00E+00 | -1.38E+00 |
| Water (user) deprivation potential, deprivation-weighted water consumption (WDP) | M3world eq. deprived/kg | 2.17E-01 | 2.99E+00 | 5.30E-03 | 3.87E-02 | NR | 0.00E+00 | 5.79E-04 | 0.00E+00 | 1.34E-02 | -2.72E-02 |
| Biogenic carbon content in product | kg C/kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | NR | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Use of secondary material | kg/kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | NR | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

WOODEX AQUA WOOD OIL

| Environmental Impact Category | Unit | A3 | A1-A3 | A4 | A5 | B1-B7 | C1 | C2 | C3 | C4 | D |
|--|----------------------------|----------|----------|----------|----------|-------|----------|----------|----------|----------|-----------|
| Global Warming Potential total (GWP-total) | kg CO ₂ ekv/kg | 1.04E+00 | 1.65E+00 | 6.64E-02 | 4.65E-01 | NR | 0.00E+00 | 7.22E-03 | 0.00E+00 | 4.27E-01 | -6.99E-02 |
| Abiotic depletion potential for non-fossil resources (ADP-minerals&metals) | kg Sb eq./kg | 6.69E-07 | 1.27E-05 | 1.53E-07 | 9.12E-07 | NR | 0.00E+00 | 1.66E-08 | 0.00E+00 | 2.37E-07 | -4.47E-08 |
| Abiotic depletion for fossil resources potential (ADP-fossil) | MJ. Net calorific value/kg | 1.33E+01 | 2.68E+01 | 1.04E+00 | 2.66E+00 | NR | 0.00E+00 | 1.13E-01 | 0.00E+00 | 2.00E+00 | -1.38E+00 |
| Water (user) deprivation potential, deprivation-weighted water consumption (WDP) | M3world eq. deprived/kg | 2.13E-01 | 4.75E+00 | 5.24E-03 | 3.81E-02 | NR | 0.00E+00 | 5.71E-04 | 0.00E+00 | 1.32E-02 | -2.68E-02 |
| Biogenic carbon content in product | kg C/kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | NR | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Use of secondary material | kg/kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | NR | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

WOODEX BIOLEUM

| Environmental Impact Category | Unit | A3 | A1-A3 | A4 | A5 | B1-B7 | C1 | C2 | C3 | C4 | D |
|--|----------------------------|----------|----------|----------|----------|-------|----------|----------|----------|----------|-----------|
| Global Warming Potential total (GWP-total) | kg CO ₂ ekv/kg | 1.16E+00 | 1.60E+00 | 6.62E-02 | 4.67E-01 | NR | 0.00E+00 | 7.22E-03 | 0.00E+00 | 4.26E-01 | -7.00E-02 |
| Abiotic depletion potential for non-fossil resources (ADP-minerals&metals) | kg Sb eq./kg | 6.40E-07 | 1.61E-05 | 1.53E-07 | 9.14E-07 | NR | 0.00E+00 | 1.66E-08 | 0.00E+00 | 2.36E-07 | -4.45E-08 |
| Abiotic depletion for fossil resources potential (ADP-fossil) | MJ. Net calorific value/kg | 1.45E+01 | 2.49E+01 | 1.04E+00 | 2.67E+00 | NR | 0.00E+00 | 1.13E-01 | 0.00E+00 | 2.00E+00 | -1.38E+00 |
| Water (user) deprivation potential, deprivation-weighted water consumption (WDP) | M3world eq. deprived/kg | 2.03E-01 | 1.56E+01 | 5.29E-03 | 3.84E-02 | NR | 0.00E+00 | 5.79E-04 | 0.00E+00 | 1.34E-02 | -2.71E-02 |
| Biogenic carbon content in product | kg C/kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | NR | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Use of secondary material | kg/kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | NR | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

WOODEX PREMIUM

| Environmental Impact Category | Unit | A3 | A1-A3 | A4 | A5 | B1-B7 | C1 | C2 | C3 | C4 | D |
|--|----------------------------|----------|----------|----------|----------|-------|----------|----------|----------|----------|-----------|
| Global Warming Potential total (GWP-total) | kg CO ₂ ekv/kg | 9.71E-01 | 2.89E+00 | 6.64E-02 | 4.65E-01 | NR | 0.00E+00 | 7.23E-03 | 0.00E+00 | 4.27E-01 | -6.98E-02 |
| Abiotic depletion potential for non-fossil resources (ADP-minerals&metals) | kg Sb eq./kg | 6.59E-07 | 2.23E-05 | 1.53E-07 | 9.09E-07 | NR | 0.00E+00 | 1.66E-08 | 0.00E+00 | 2.37E-07 | -4.44E-08 |
| Abiotic depletion for fossil resources potential (ADP-fossil) | MJ. Net calorific value/kg | 1.26E+01 | 5.76E+01 | 1.04E+00 | 2.65E+00 | NR | 0.00E+00 | 1.14E-01 | 0.00E+00 | 2.01E+00 | -1.38E+00 |
| Water (user) deprivation potential, deprivation-weighted water consumption (WDP) | M3world eq. deprived/kg | 2.18E-01 | 7.38E+00 | 5.31E-03 | 3.87E-02 | NR | 0.00E+00 | 5.78E-04 | 0.00E+00 | 1.34E-02 | -2.71E-02 |
| Biogenic carbon content in product | kg C/kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | NR | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Use of secondary material | kg/kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | NR | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

11. Description of product and its use

WOODEX AQUA CLASSIC is a water-borne, hybrid binder based, non-film-forming transparent wood stain for outdoor use. Protects wooden surfaces from moisture, soiling and when tinted from UV radiation of the sun.

WOODEX AQUA WOOD OIL is a water-borne wood oil for outdoor use.

WOODEX BIOLEUM is a water-borne, tintable wood oil, which is applied only once. 60% of the total carbon content is bio-based (based on C14 analysis according to EN 16640).

WOODEX PREMIUM is a water-borne, acrylate-based special wood stain. It is easy to apply by brush, it does not run or spatter during painting and it protects the wood effectively from moisture, soiling and when tinted from UV radiation of the sun.

Product standards (c-PCR)

c-PCR is not used in the calculations.

12. Physical properties

WOODEX is a waterborne coating for outdoor wooden surfaces. It covers 4-12 m²/l and is applied in 1 or 2 layers.

13. Raw materials of the product and product information

| Product structure / composition / raw material | Quantity p%* | Usability | | | Origin of the raw materials |
|--|--------------|-----------|---------------|----------|-----------------------------|
| | | Renewable | Non-renewable | Recycled | |
| Additives | 8-10% | | x | | Europe/Global. |
| Colorants | 1-2% | | x | | Europe/Global. |
| Extenders | 8-10% | | x | | Europe/Global. |
| Pigments | 9-12% | | x | | Europe/Global. |
| Resins | 15-21% | | x | | Europe/Global. |
| Solvents | 40-50% | | x | | Europe/Global. |

*Order of magnitude, not exact composition

14. Substances under European Chemicals Agency's REACH, SVHC restrictions

<http://echa.europa.eu/web/guest/candidate-list-table> Compulsory CAS-number

| Name | EC Number | CAS Number |
|------------------|-----------|------------|
| Does not include | - | - |

SCOPE OF LIFE CYCLE ASSESMENT (Standard 7.2.1-2)

Mark all the covered modules of the EPD with X. Mandatory modules are marked with blue in the table below. This declaration covers “cradle-to-gate with options”. Please fulfil relevant stages “R” (relevant) and non-relevant stages “NR”.

| Product stage | | | Construction process stage | | Use stage | | | | | | | End of life stage | | | | Supplementary information beyond the life cycle | | |
|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-----------|-------------|--------|-------------|---------------|------------------------|-----------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|---|-------------------------------------|-------------------------------------|
| A1 | A2 | A3 | A4 | A5 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | C1 | C2 | C3 | C4 | D | D | D |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | NR | NR | NR | NR | NR | NR | NR | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Raw material supply | Transport | Manufacturing | Transport | Construction-Installation process | Use | Maintenance | Repair | Replacement | Refurbishment | Operational energy use | Operational water use | De-construction demolition | Transport | Waste processing | Disposal | Reuse | Recovery | Recycling |

| |
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Mandatory modules
Mandatory as per the RTS PCR section 6.2.1 rules and terms
Optional modules based on scenarios

15. Functional / declared unit

The environmental performance of the paints is calculated using the declared unit “1 m² of paint”. This declared unit encompasses the following paint characteristics: paints coverage (m²/l), density (kg/l) and number of layers needed in its application. Therefore, the declared unit was calculated as follows:

$$Declared\ Unit = Coverage\ [kg/m^2] \times number\ of\ layers$$

| Product | kg/m ² |
|----------------------|-------------------|
| WOODEX AQUA CLASSIC | 4.48E-01 |
| WOODEX AQUA WOOD OIL | 4.07E-01 |
| WOODEX BIOLEUM | 2.00E-01 |
| WOODEX PREMIUM | 4.08E-01 |

16. System boundary

This LCA is a Cradle-to-Grave with options. All major steps, from the extraction of natural resources to the final disposal of the product, are included in the scope of the study. The life cycle stages included are A1-A5, C2 and C4 and D. The use stage, B, is not considered in this study, since no impact are associated with the use stage. 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. Mining activities and controlled landfills are included in the product systems. Wastewater treatment is not considered within the technological systems since it is already included in the solid waste treatment processes. The emissions and resource

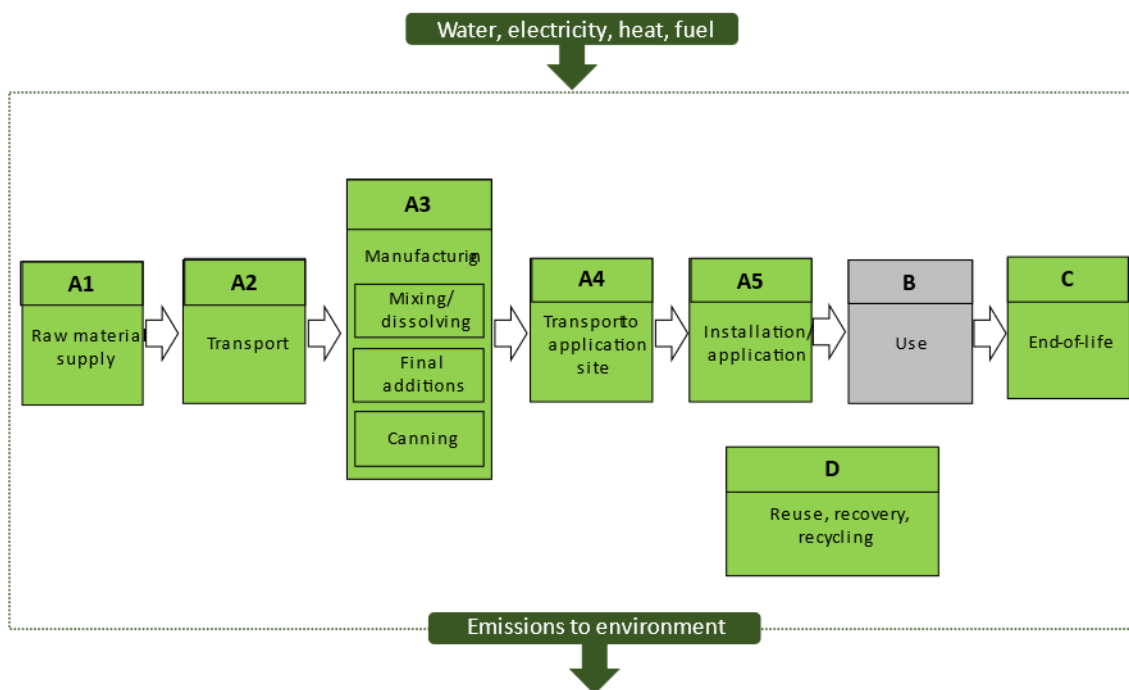
extractions derived from these processes are considered elementary exchanges between the product systems and the environment.

Paint products do not consume resources and are not released into the environment during the use phase. 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 recycled. 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. Energy recovery values for the paint waste are taken on the default level in PEFCR for decorative paints: 1.01 MJ of electricity and 2.16 MJ of heat per kg of waste. Energy recovery values for the packaging materials waste are taken from the background documentation of the respective Ecoinvent datasets.

The allocation is made in accordance with EN15804:A2. Allocation is based on physical and production shares. Energy and water use are allocated according to production volume.



17. 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 [Wernet, G. et al. 2016; <https://www.ecoinvent.org/>], [Dahlgren, L. et al., 2016]). Furthermore, brushes, clothes, buckets etc., used during the application process are excluded from the assessment since they are being considered capital goods.

18. Production process

The following variables have been taken into account during the production phase of the coating. Energy inputs – electricity, diesel, liquefied petroleum gas and water – production outputs – hazardous and non-hazardous waste, waste water and direct VOC emissions. After the production of the paints the produces are packaged.

A1. Raw materials supply

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

A2. Transportation of raw materials to manufacturer

Life-cycle stage A2 includes the transport mode and distance of the raw materials to the production facility.

| Raw material transport | Quantity |
|------------------------|--------------------------|
| Type of truck | Lorry, total weight >32t |
| Distance | 460 km |
| Capacity | 64% |

A3. Manufacturing

Life-cycle stage A3 includes the manufacturing of WOODEX coatings and includes all processes linked to the production, for example mixing, packaging and transportation. The use of energy, electricity and fuels are taken into account too.

Primary production data was obtained, regarding the inputs. For the electricity grid mix the EcolInvent 3.8 database was used. Generic data was used for upstream and downstream processes (application, use and waste processing), when no specific data was obtained. The production data was obtained for one production site, Rajamäki, Finland.

For the Paint packaging, the data for the steel tinplated was obtained from primary data for the other packaging formats 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.

| Packaging format | Unit | Packaging |
|--------------------|-------------|----------------|
| Cardboard | kg/kg paint | 0.001092 |
| Polyethylene film | kg/kg paint | 0.001236 |
| Polypropylene | kg/kg paint | 0.0487116 |
| Polypropylene part | kg/kg paint | 0.046392 |
| Steel tinplated | kg/kg paint | paint specific |
| Wooden pallets | kg/kg paint | 0.061824 |

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 RDC and final customer, 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 and use

Life-cycle stage A5 includes the environmental impacts during application and use of the coating. Auxiliary materials such as brushers and rollers are not taken into account. The impact of energy to spray the coating is neglectable and therefore not considered in this study.

In the application VOC emissions are emitted and include in this life-cycle stage.

C2. Transport of waste material

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

| End-of-life transport | PoS to waste processing |
|-----------------------|--------------------------|
| Type of truck | Lorry, total weight >32t |
| 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 paint is used on both interior and exterior surfaces and that in both cases paint is lost during application. The paint that is not lost is considered applied.

D. Benefits and loads beyond the system boundaries

Module D has the impacts of benefits and loads beyond the system boundaries. It is assumed that benefits and loads arise from the potential energy recovery in the incineration of non-hazardous waste scenario including wet paint, as well as from energy collected from the waste treatment of hazardous waste and hazardous wet paint waste in stages A5 and C4. As a conservative assumption.

SCOPE OF THE LIFE-CYCLE ASSESSMENT (Standard 7.2.3–7.2.4)

19. Environmental impacts (7.2.3, table 3) The results of the impact assessment are relative. They do not predict the effects on the weighted values of the categories, the exceedance limits, safety margins and risks.

WOODEX AQUA CLASSIC

| Indicators | Unit | A1-A3 | A4 | A5 | B1-B7 | C1 | C2 | C3 | C4 | D |
|---|--------------------------|-----------|----------|----------|-------|----------|----------|----------|----------|-----------|
| Global Warming Potential total (GWP-total) | kg CO ₂ ekv | 1.14E+00 | 2.97E-02 | 2.09E-01 | NR | 0.00E+00 | 3.24E-03 | 0.00E+00 | 1.91E-01 | -3.14E-02 |
| Global Warming Potential fossil fuels (GWP-fossil) | kg CO ₂ ekv | 1.23E+00 | 2.96E-02 | 1.83E-01 | NR | 0.00E+00 | 3.23E-03 | 0.00E+00 | 1.91E-01 | -2.99E-02 |
| Global Warming Potential biogenic (GWP-biogenic) | kg CO ₂ ekv | -8.78E-02 | 1.08E-04 | 2.53E-02 | NR | 0.00E+00 | 1.18E-05 | 0.00E+00 | 1.44E-04 | -1.49E-03 |
| Global Warming Potential land use and land use change (GWP-luluc) | kg CO ₂ ekv | 7.19E-04 | 1.11E-05 | 3.32E-05 | NR | 0.00E+00 | 1.21E-06 | 0.00E+00 | 9.24E-06 | -3.62E-05 |
| Depletion potential of the stratospheric ozone layer (ODP) | kg CFC 11 ekv | 1.04E-06 | 7.12E-09 | 2.21E-08 | NR | 0.00E+00 | 7.77E-10 | 0.00E+00 | 1.48E-08 | -3.04E-09 |
| Acidification potential, Accumulated Exceedance (AP) | mol H ⁺ eqv | 7.38E-03 | 1.50E-04 | 3.13E-04 | NR | 0.00E+00 | 1.64E-05 | 0.00E+00 | 1.97E-04 | -9.44E-05 |
| Eutrophication potential, fraction of nutrients reaching freshwater end compartment (EP-freshwater) | kg PO ₄ - ekv | 1.57E-04 | 1.86E-06 | 1.14E-05 | NR | 0.00E+00 | 2.03E-07 | 0.00E+00 | 2.15E-06 | -1.52E-05 |
| Eutrophication potential, fraction of nutrients reaching marine end compartment (EP-marine) | kg N ekv. | 2.23E-03 | 5.17E-05 | 6.37E-05 | NR | 0.00E+00 | 5.64E-06 | 0.00E+00 | 3.31E-05 | -1.81E-05 |
| Eutrophication potential, Accumulated Exceedance (EP-terrestrial) | mol N ekv. | 1.44E-02 | 5.65E-04 | 6.41E-04 | NR | 0.00E+00 | 6.16E-05 | 0.00E+00 | 3.66E-04 | -1.66E-04 |
| Formation potential of tropospheric ozone (POCP) | kg NMVOC eq. | 1.18E-02 | 1.69E-04 | 2.26E-04 | NR | 0.00E+00 | 1.84E-05 | 0.00E+00 | 1.17E-04 | -4.83E-05 |
| Abiotic depletion potential for non-fossil resources (ADP-minerals&metals) | kg Sb eq. | 6.77E-06 | 6.85E-08 | 4.08E-07 | NR | 0.00E+00 | 7.47E-09 | 0.00E+00 | 1.06E-07 | -2.00E-08 |
| Abiotic depletion for fossil resources potential (ADP-fossil) | MJ. Net calorific value | 1.89E+01 | 4.67E-01 | 1.19E+00 | NR | 0.00E+00 | 5.09E-02 | 0.00E+00 | 8.99E-01 | -6.21E-01 |
| Water (user) deprivation potential, deprivation-weighted water consumption (WDP) | M3world eq. deprived | 1.34E+00 | 2.38E-03 | 1.73E-02 | NR | 0.00E+00 | 2.59E-04 | 0.00E+00 | 6.00E-03 | -1.22E-02 |

WOODEX AQUA WOOD OIL

| Indicators | Unit | A1-A3 | A4 | A5 | B1-B7 | C1 | C2 | C3 | C4 | D |
|---|--------------------------|-----------|----------|----------|-------|----------|----------|----------|----------|-----------|
| Global Warming Potential total (GWP-total) | kg CO ₂ ekv | 6.70E-01 | 2.70E-02 | 1.89E-01 | NR | 0.00E+00 | 2.94E-03 | 0.00E+00 | 1.74E-01 | -2.84E-02 |
| Global Warming Potential fossil fuels (GWP-fossil) | kg CO ₂ ekv | 6.88E-01 | 2.69E-02 | 1.66E-01 | NR | 0.00E+00 | 2.93E-03 | 0.00E+00 | 1.73E-01 | -2.71E-02 |
| Global Warming Potential biogenic (GWP-biogenic) | kg CO ₂ ekv | -1.80E-02 | 9.83E-05 | 2.30E-02 | NR | 0.00E+00 | 1.07E-05 | 0.00E+00 | 1.31E-04 | -1.35E-03 |
| Global Warming Potential land use and land use change (GWP-luluc) | kg CO ₂ ekv | 6.69E-04 | 1.01E-05 | 3.03E-05 | NR | 0.00E+00 | 1.09E-06 | 0.00E+00 | 8.38E-06 | -3.28E-05 |
| Depletion potential of the stratospheric ozone layer (ODP) | kg CFC 11 ekv | 1.03E-07 | 6.47E-09 | 2.01E-08 | NR | 0.00E+00 | 7.05E-10 | 0.00E+00 | 1.34E-08 | -2.75E-09 |
| Acidification potential, Accumulated Exceedance (AP) | mol H ⁺ eqv | 3.16E-03 | 1.37E-04 | 2.85E-04 | NR | 0.00E+00 | 1.49E-05 | 0.00E+00 | 1.79E-04 | -8.54E-05 |
| Eutrophication potential, fraction of nutrients reaching freshwater end compartment (EP-freshwater) | kg PO ₄ - ekv | 9.93E-05 | 1.69E-06 | 1.04E-05 | NR | 0.00E+00 | 1.84E-07 | 0.00E+00 | 1.95E-06 | -1.38E-05 |
| Eutrophication potential, fraction of nutrients reaching marine end compartment (EP-marine) | kg N ekv. | 1.27E-03 | 4.70E-05 | 5.80E-05 | NR | 0.00E+00 | 5.11E-06 | 0.00E+00 | 3.00E-05 | -1.64E-05 |
| Eutrophication potential, Accumulated Exceedance (EP-terrestrial) | mol N ekv. | 5.91E-03 | 5.13E-04 | 5.84E-04 | NR | 0.00E+00 | 5.59E-05 | 0.00E+00 | 3.32E-04 | -1.50E-04 |
| Formation potential of tropospheric ozone (POCP) | kg NMVOC eq. | 8.39E-03 | 1.53E-04 | 1.74E-04 | NR | 0.00E+00 | 1.67E-05 | 0.00E+00 | 1.06E-04 | -4.37E-05 |
| Abiotic depletion potential for non-fossil resources (ADP-minerals&metals) | kg Sb eq. | 5.17E-06 | 6.23E-08 | 3.72E-07 | NR | 0.00E+00 | 6.79E-09 | 0.00E+00 | 9.66E-08 | -1.82E-08 |
| Abiotic depletion for fossil resources potential (ADP-fossil) | MJ. Net calorific value | 1.09E+01 | 4.24E-01 | 1.08E+00 | NR | 0.00E+00 | 4.62E-02 | 0.00E+00 | 8.15E-01 | -5.62E-01 |
| Water (user) deprivation potential, deprivation-weighted water consumption (WDP) | M3world eq. deprived | 1.94E+00 | 2.14E-03 | 1.56E-02 | NR | 0.00E+00 | 2.33E-04 | 0.00E+00 | 5.39E-03 | -1.09E-02 |

WOODEX BIOLEUM

| Indicators | Unit | A1-A3 | A4 | A5 | B1-B7 | C1 | C2 | C3 | C4 | D |
|---|--------------------------|-----------|----------|----------|-------|----------|----------|----------|----------|-----------|
| Global Warming Potential total (GWP-total) | kg CO ₂ ekv | 3.20E-01 | 1.33E-02 | 9.35E-02 | NR | 0.00E+00 | 1.45E-03 | 0.00E+00 | 8.54E-02 | -1.40E-02 |
| Global Warming Potential fossil fuels (GWP-fossil) | kg CO ₂ ekv | 3.41E-01 | 1.32E-02 | 8.21E-02 | NR | 0.00E+00 | 1.44E-03 | 0.00E+00 | 8.53E-02 | -1.33E-02 |
| Global Warming Potential biogenic (GWP-biogenic) | kg CO ₂ ekv | -2.50E-02 | 4.83E-05 | 1.14E-02 | NR | 0.00E+00 | 5.26E-06 | 0.00E+00 | 6.43E-05 | -6.63E-04 |
| Global Warming Potential land use and land use change (GWP-luluc) | kg CO ₂ ekv | 4.02E-03 | 4.94E-06 | 1.51E-05 | NR | 0.00E+00 | 5.38E-07 | 0.00E+00 | 4.12E-06 | -1.62E-05 |
| Depletion potential of the stratospheric ozone layer (ODP) | kg CFC 11 ekv | 3.81E-08 | 3.18E-09 | 9.92E-09 | NR | 0.00E+00 | 3.46E-10 | 0.00E+00 | 6.59E-09 | -1.36E-09 |
| Acidification potential, Accumulated Exceedance (AP) | mol H ⁺ eqv | 1.48E-03 | 6.72E-05 | 1.41E-04 | NR | 0.00E+00 | 7.32E-06 | 0.00E+00 | 8.78E-05 | -4.21E-05 |
| Eutrophication potential, fraction of nutrients reaching freshwater end compartment (EP-freshwater) | kg PO ₄ - ekv | 4.59E-05 | 8.30E-07 | 5.18E-06 | NR | 0.00E+00 | 9.04E-08 | 0.00E+00 | 9.58E-07 | -6.79E-06 |
| Eutrophication potential, fraction of nutrients reaching marine end compartment (EP-marine) | kg N ekv. | 4.12E-04 | 2.31E-05 | 2.89E-05 | NR | 0.00E+00 | 2.51E-06 | 0.00E+00 | 1.47E-05 | -8.09E-06 |
| Eutrophication potential, Accumulated Exceedance (EP-terrestrial) | mol N ekv. | 2.53E-03 | 2.52E-04 | 2.91E-04 | NR | 0.00E+00 | 2.75E-05 | 0.00E+00 | 1.63E-04 | -7.40E-05 |
| Formation potential of tropospheric ozone (POCP) | kg NMVOC eq. | 4.01E-03 | 7.53E-05 | 8.65E-05 | NR | 0.00E+00 | 8.21E-06 | 0.00E+00 | 5.21E-05 | -2.15E-05 |
| Abiotic depletion potential for non-fossil resources (ADP-minerals&metals) | kg Sb eq. | 3.23E-06 | 3.06E-08 | 1.83E-07 | NR | 0.00E+00 | 3.33E-09 | 0.00E+00 | 4.73E-08 | -8.92E-09 |
| Abiotic depletion for fossil resources potential (ADP-fossil) | MJ. Net calorific value | 4.99E+00 | 2.08E-01 | 5.36E-01 | NR | 0.00E+00 | 2.27E-02 | 0.00E+00 | 4.01E-01 | -2.77E-01 |
| Water (user) deprivation potential, deprivation-weighted water consumption (WDP) | M3world eq. deprived | 4.02E-03 | 4.94E-06 | 1.51E-05 | NR | 0.00E+00 | 5.38E-07 | 0.00E+00 | 4.12E-06 | -1.62E-05 |

WOODEX PREMIUM

| Indicators | Unit | A1-A3 | A4 | A5 | B1-B7 | C1 | C2 | C3 | C4 | D |
|---|--------------------------|-----------|----------|----------|-------|----------|----------|----------|----------|-----------|
| Global Warming Potential total (GWP-total) | kg CO ₂ ekv | 1.18E+00 | 2.71E-02 | 1.90E-01 | NR | 0.00E+00 | 2.95E-03 | 0.00E+00 | 1.74E-01 | -2.85E-02 |
| Global Warming Potential fossil fuels (GWP-fossil) | kg CO ₂ ekv | 1.21E+00 | 2.70E-02 | 1.67E-01 | NR | 0.00E+00 | 2.94E-03 | 0.00E+00 | 1.74E-01 | -2.71E-02 |
| Global Warming Potential biogenic (GWP-biogenic) | kg CO ₂ ekv | -3.81E-02 | 9.85E-05 | 2.29E-02 | NR | 0.00E+00 | 1.07E-05 | 0.00E+00 | 1.31E-04 | -1.35E-03 |
| Global Warming Potential land use and land use change (GWP-luluc) | kg CO ₂ ekv | 2.25E-03 | 1.01E-05 | 3.02E-05 | NR | 0.00E+00 | 1.10E-06 | 0.00E+00 | 8.41E-06 | -3.28E-05 |
| Depletion potential of the stratospheric ozone layer (ODP) | kg CFC 11 ekv | 1.43E-07 | 6.49E-09 | 2.01E-08 | NR | 0.00E+00 | 7.07E-10 | 0.00E+00 | 1.35E-08 | -2.76E-09 |
| Acidification potential, Accumulated Exceedance (AP) | mol H ⁺ eqv | 6.22E-03 | 1.37E-04 | 2.84E-04 | NR | 0.00E+00 | 1.49E-05 | 0.00E+00 | 1.79E-04 | -8.55E-05 |
| Eutrophication potential, fraction of nutrients reaching freshwater end compartment (EP-freshwater) | kg PO ₄ - ekv | 2.54E-04 | 1.69E-06 | 1.03E-05 | NR | 0.00E+00 | 1.84E-07 | 0.00E+00 | 1.96E-06 | -1.38E-05 |
| Eutrophication potential, fraction of nutrients reaching marine end compartment (EP-marine) | kg N ekv. | 1.12E-03 | 4.71E-05 | 5.79E-05 | NR | 0.00E+00 | 5.13E-06 | 0.00E+00 | 3.01E-05 | -1.64E-05 |
| Eutrophication potential, Accumulated Exceedance (EP-terrestrial) | mol N ekv. | 9.13E-03 | 5.14E-04 | 5.82E-04 | NR | 0.00E+00 | 5.60E-05 | 0.00E+00 | 3.33E-04 | -1.50E-04 |
| Formation potential of tropospheric ozone (POCP) | kg NMVOC eq. | 1.00E-02 | 1.54E-04 | 1.73E-04 | NR | 0.00E+00 | 1.67E-05 | 0.00E+00 | 1.06E-04 | -4.38E-05 |
| Abiotic depletion potential for non-fossil resources (ADP-minerals&metals) | kg Sb eq. | 9.11E-06 | 6.23E-08 | 3.71E-07 | NR | 0.00E+00 | 6.79E-09 | 0.00E+00 | 9.66E-08 | -1.81E-08 |
| Abiotic depletion for fossil resources potential (ADP-fossil) | MJ. Net calorific value | 2.35E+01 | 4.25E-01 | 1.08E+00 | NR | 0.00E+00 | 4.63E-02 | 0.00E+00 | 8.18E-01 | -5.62E-01 |
| Water (user) deprivation potential, deprivation-weighted water consumption (WDP) | M3world eq. deprived | 3.01E+00 | 2.17E-03 | 1.58E-02 | NR | 0.00E+00 | 2.36E-04 | 0.00E+00 | 5.46E-03 | -1.11E-02 |

20. Standard 7.2.3.2 Additional environmental impact indicators (voluntary information).
WOODEX AQUA CLASSIC

| Indicator | Unit | A1-A3 | A4 | A5 | B1-B7 | C1 | C2 | C3 | C4 | D |
|--|----------------------|----------|----------|----------|-------|----------|----------|----------|----------|-----------|
| Potential incidence of disease due to PM emissions (PM) | Incidence of disease | 1.13E-07 | 2.75E-09 | 2.72E-09 | NR | 0.00E+00 | 3.00E-10 | 0.00E+00 | 1.88E-09 | -2.62E-10 |
| Potential Human exposure efficiency relative to U235 (IRP) | kBq U235 eq. | 1.06E-01 | 2.35E-03 | 6.47E-03 | NR | 0.00E+00 | 2.57E-04 | 0.00E+00 | 4.29E-03 | -9.02E-03 |
| Potential Comparative Toxic Unit for ecosystems (ETP-fw) | CTUh | 2.18E+01 | 3.77E-01 | 3.49E+02 | NR | 0.00E+00 | 4.11E-02 | 0.00E+00 | 8.41E-01 | -1.88E-01 |
| Potential Comparative Toxic Unit for humans (HTP-c) | CTUh | 1.16E-09 | 1.00E-11 | 4.28E-11 | NR | 0.00E+00 | 1.10E-12 | 0.00E+00 | 3.72E-10 | -5.53E-12 |
| Potential Comparative Toxic Unit for humans (HTP-nc) | CTUh | 2.35E-08 | 3.45E-10 | 2.23E-09 | NR | 0.00E+00 | 3.76E-11 | 0.00E+00 | 6.87E-10 | -1.67E-10 |
| Potential soil quality index (SQP) | Dimensionless | 1.98E+01 | 5.32E-01 | 3.18E-01 | NR | 0.00E+00 | 5.80E-02 | 0.00E+00 | 2.33E-01 | -5.22E-02 |

WOODEX AQUA WOOD OIL

| Indicator | Unit | A1-A3 | A4 | A5 | B1-B7 | C1 | C2 | C3 | C4 | D |
|--|----------------------|----------|----------|----------|-------|----------|----------|----------|----------|-----------|
| Potential incidence of disease due to PM emissions (PM) | Incidence of disease | 4.36E-08 | 2.50E-09 | 2.48E-09 | NR | 0.00E+00 | 2.72E-10 | 0.00E+00 | 1.71E-09 | -2.37E-10 |
| Potential Human exposure efficiency relative to U235 (IRP) | kBq U235 eq. | 8.43E-02 | 2.14E-03 | 5.88E-03 | NR | 0.00E+00 | 2.33E-04 | 0.00E+00 | 3.90E-03 | -8.16E-03 |
| Potential Comparative Toxic Unit for ecosystems (ETP-fw) | CTUh | 1.57E+01 | 3.42E-01 | 3.42E+02 | NR | 0.00E+00 | 3.73E-02 | 0.00E+00 | 7.63E-01 | -1.70E-01 |
| Potential Comparative Toxic Unit for humans (HTP-c) | CTUh | 4.18E-10 | 9.13E-12 | 3.89E-11 | NR | 0.00E+00 | 9.94E-13 | 0.00E+00 | 3.37E-10 | -5.00E-12 |
| Potential Comparative Toxic Unit for humans (HTP-nc) | CTUh | 1.61E-08 | 3.13E-10 | 2.89E-09 | NR | 0.00E+00 | 3.41E-11 | 0.00E+00 | 6.23E-10 | -1.51E-10 |
| Potential soil quality index (SQP) | Dimensionless | 1.09E+01 | 4.83E-01 | 2.91E-01 | NR | 0.00E+00 | 5.26E-02 | 0.00E+00 | 2.11E-01 | -4.73E-02 |

WOODEX BIOLEUM

| Indicator | Unit | A1-A3 | A4 | A5 | B1-B7 | C1 | C2 | C3 | C4 | D |
|--|----------------------|----------|----------|----------|-------|----------|----------|----------|----------|-----------|
| Potential incidence of disease due to PM emissions (PM) | Incidence of disease | 2.19E-08 | 1.23E-09 | 1.25E-09 | NR | 0.00E+00 | 1.34E-10 | 0.00E+00 | 8.39E-10 | -1.17E-10 |
| Potential Human exposure efficiency relative to U235 (IRP) | kBq U235 eq. | 3.74E-02 | 1.05E-03 | 2.91E-03 | NR | 0.00E+00 | 1.14E-04 | 0.00E+00 | 1.92E-03 | -4.02E-03 |
| Potential Comparative Toxic Unit for ecosystems (ETP-fw) | CTUh | 1.32E+01 | 1.67E-01 | 5.47E+02 | NR | 0.00E+00 | 1.83E-02 | 0.00E+00 | 3.74E-01 | -8.34E-02 |
| Potential Comparative Toxic Unit for humans (HTP-c) | CTUh | 2.85E-10 | 4.48E-12 | 1.94E-11 | NR | 0.00E+00 | 4.88E-13 | 0.00E+00 | 1.66E-10 | -2.46E-12 |
| Potential Comparative Toxic Unit for humans (HTP-nc) | CTUh | 5.93E-09 | 1.53E-10 | 3.50E-09 | NR | 0.00E+00 | 1.68E-11 | 0.00E+00 | 3.05E-10 | -7.40E-11 |
| Potential soil quality index (SQP) | Dimensionless | 4.81E+00 | 2.37E-01 | 1.47E-01 | NR | 0.00E+00 | 2.59E-02 | 0.00E+00 | 1.04E-01 | -2.33E-02 |

WOODEX PREMIUM

| Indicator | Unit | A1-A3 | A4 | A5 | B1-B7 | C1 | C2 | C3 | C4 | D |
|--|----------------------|----------|----------|----------|-------|----------|----------|----------|----------|-----------|
| Potential incidence of disease due to PM emissions (PM) | Incidence of disease | 9.70E-08 | 2.50E-09 | 2.47E-09 | NR | 0.00E+00 | 2.73E-10 | 0.00E+00 | 1.71E-09 | -2.38E-10 |
| Potential Human exposure efficiency relative to U235 (IRP) | kBq U235 eq. | 1.54E-01 | 2.14E-03 | 5.88E-03 | NR | 0.00E+00 | 2.33E-04 | 0.00E+00 | 3.91E-03 | -8.17E-03 |
| Potential Comparative Toxic Unit for ecosystems (ETP-fw) | CTUh | 2.11E+01 | 3.43E-01 | 2.44E+00 | NR | 0.00E+00 | 3.74E-02 | 0.00E+00 | 7.66E-01 | -1.70E-01 |
| Potential Comparative Toxic Unit for humans (HTP-c) | CTUh | 5.84E-10 | 9.15E-12 | 3.88E-11 | NR | 0.00E+00 | 9.96E-13 | 0.00E+00 | 3.38E-10 | -5.01E-12 |
| Potential Comparative Toxic Unit for humans (HTP-nc) | CTUh | 1.67E-08 | 3.14E-10 | 1.29E-09 | NR | 0.00E+00 | 3.42E-11 | 0.00E+00 | 6.25E-10 | -1.51E-10 |
| Potential soil quality index (SQP) | Dimension-less | 8.96E+00 | 4.84E-01 | 2.88E-01 | NR | 0.00E+00 | 5.27E-02 | 0.00E+00 | 2.12E-01 | -4.73E-02 |

21. Standard 7.2.4 Use of natural resources
WOODEX AQUA CLASSIC

| Use of natural resources | Unit | A1-A3 | A4 | A5 | B1-B7 | C1 | C2 | C3 | C4 | D |
|--|----------------|----------|----------|----------|-------|----------|----------|----------|----------|-----------|
| Use of renewable primary energy excluding renewable primary energy resources used as raw materials | MJ | 4.05E+00 | 5.94E-03 | 1.84E-02 | NR | 0.00E+00 | 6.47E-04 | 0.00E+00 | 4.89E-02 | -4.43E-02 |
| Renewable primary energy resources used as raw materials | MJ | 1.64E-02 | 2.77E-09 | 3.99E-09 | NR | 0.00E+00 | 3.02E-10 | 0.00E+00 | 1.42E-08 | -1.65E-09 |
| Total use of renewable primary energy resources | MJ | 4.07E+00 | 5.94E-03 | 1.84E-02 | NR | 0.00E+00 | 6.47E-04 | 0.00E+00 | 4.89E-02 | -4.43E-02 |
| Use of non renewable primary energy excluding non renewable primary energy resources used as raw materials | MJ | 1.89E+01 | 4.67E-01 | 8.40E-01 | NR | 0.00E+00 | 5.09E-02 | 0.00E+00 | 7.00E+00 | -4.73E-01 |
| Non renewable primary energy resources used as raw materials | MJ | 1.99E-06 | 0.00E+00 | 0.00E+00 | NR | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Total use of non renewable primary energy resources | MJ | 1.89E+01 | 4.67E-01 | 8.40E-01 | NR | 0.00E+00 | 5.09E-02 | 0.00E+00 | 7.00E+00 | -4.73E-01 |
| Use of secondary material | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | NR | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Use of renewable secondary fuels | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | NR | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Use of non-renewable secondary fuels | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | NR | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Net use of fresh water (7.2.3) | m ³ | 2.95E-02 | 5.54E-05 | 2.87E-04 | NR | 0.00E+00 | 6.03E-06 | 0.00E+00 | 6.45E-04 | -2.17E-04 |

WOODEX AQUA WOOD OIL

| Use of natural resources | Unit | A1-A3 | A4 | A5 | B1-B7 | C1 | C2 | C3 | C4 | D |
|--|----------------|----------|----------|----------|-------|----------|----------|----------|----------|-----------|
| Use of renewable primary energy excluding renewable primary energy resources used as raw materials | MJ | 1.61E+00 | 5.40E-03 | 1.67E-02 | NR | 0.00E+00 | 5.88E-04 | 0.00E+00 | 5.21E-04 | -4.02E-02 |
| Renewable primary energy resources used as raw materials | MJ | 1.49E-02 | 2.52E-09 | 3.66E-09 | NR | 0.00E+00 | 2.74E-10 | 0.00E+00 | 1.25E-09 | -1.49E-09 |
| Total use of renewable primary energy resources | MJ | 1.62E+00 | 5.40E-03 | 1.67E-02 | NR | 0.00E+00 | 5.88E-04 | 0.00E+00 | 5.21E-04 | -4.02E-02 |
| Use of non renewable primary energy excluding non renewable primary energy resources used as raw materials | MJ | 1.05E+01 | 4.24E-01 | 7.64E-01 | NR | 0.00E+00 | 4.62E-02 | 0.00E+00 | 6.01E-02 | -4.29E-01 |
| Non renewable primary energy resources used as raw materials | MJ | 1.89E-06 | 0.00E+00 | 0.00E+00 | NR | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Total use of non renewable primary energy resources | MJ | 1.05E+01 | 4.24E-01 | 7.64E-01 | NR | 0.00E+00 | 4.62E-02 | 0.00E+00 | 6.01E-02 | -4.29E-01 |
| Use of secondary material | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | NR | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Use of renewable secondary fuels | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | NR | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Use of non-renewable secondary fuels | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | NR | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Net use of fresh water (7.2.3) | m ³ | 2.40E-02 | 5.03E-05 | 2.61E-04 | NR | 0.00E+00 | 5.48E-06 | 0.00E+00 | 6.42E-05 | -1.97E-04 |

WOODEX BIOLEUM

| Use of natural resources | Unit | A1-A3 | A4 | A5 | B1-B7 | C1 | C2 | C3 | C4 | D |
|--|----------------|----------|----------|----------|-------|----------|----------|----------|----------|-----------|
| Use of renewable primary energy excluding renewable primary energy resources used as raw materials | MJ | 5.68E-01 | 2.65E-03 | 8.25E-03 | NR | 0.00E+00 | 2.89E-04 | 0.00E+00 | 2.18E-02 | -1.98E-02 |
| Renewable primary energy resources used as raw materials | MJ | 7.35E-03 | 1.24E-09 | 1.85E-09 | NR | 0.00E+00 | 1.35E-10 | 0.00E+00 | 6.34E-09 | -7.36E-10 |
| Total use of renewable primary energy resources | MJ | 5.75E-01 | 2.65E-03 | 8.25E-03 | NR | 0.00E+00 | 2.89E-04 | 0.00E+00 | 2.18E-02 | -1.98E-02 |
| Use of non renewable primary energy excluding non renewable primary energy resources used as raw materials | MJ | 4.96E+00 | 2.08E-01 | 3.79E-01 | NR | 0.00E+00 | 2.27E-02 | 0.00E+00 | 3.12E+00 | -2.11E-01 |
| Non renewable primary energy resources used as raw materials | MJ | 1.74E-06 | 0.00E+00 | 0.00E+00 | NR | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Total use of non renewable primary energy resources | MJ | 4.96E+00 | 2.08E-01 | 3.79E-01 | NR | 0.00E+00 | 2.27E-02 | 0.00E+00 | 3.12E+00 | -2.11E-01 |
| Use of secondary material | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | NR | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Use of renewable secondary fuels | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | NR | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Use of non-renewable secondary fuels | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | NR | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Net use of fresh water (7.2.3) | m ³ | 1.10E-02 | 2.47E-05 | 1.28E-04 | NR | 0.00E+00 | 2.69E-06 | 0.00E+00 | 2.88E-04 | -9.69E-05 |

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| Use of natural resources | Unit | A1-A3 | A4 | A5 | B1-B7 | C1 | C2 | C3 | C4 | D |
|--|----------------|----------|----------|----------|-------|----------|----------|----------|----------|-----------|
| Use of renewable primary energy excluding renewable primary energy resources used as raw materials | MJ | 5.68E-01 | 2.65E-03 | 8.25E-03 | NR | 0.00E+00 | 2.89E-04 | 0.00E+00 | 5.23E-04 | -4.04E-02 |
| Renewable primary energy resources used as raw materials | MJ | 7.35E-03 | 1.24E-09 | 1.85E-09 | NR | 0.00E+00 | 1.35E-10 | 0.00E+00 | 1.25E-09 | -1.50E-09 |
| Total use of renewable primary energy resources | MJ | 5.75E-01 | 2.65E-03 | 8.25E-03 | NR | 0.00E+00 | 2.89E-04 | 0.00E+00 | 5.23E-04 | -4.04E-02 |
| Use of non renewable primary energy excluding non renewable primary energy resources used as raw materials | MJ | 4.96E+00 | 2.08E-01 | 3.79E-01 | NR | 0.00E+00 | 2.27E-02 | 0.00E+00 | 6.03E-02 | -4.31E-01 |
| Non renewable primary energy resources used as raw materials | MJ | 1.74E-06 | 0.00E+00 | 0.00E+00 | NR | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Total use of non renewable primary energy resources | MJ | 4.96E+00 | 2.08E-01 | 3.79E-01 | NR | 0.00E+00 | 2.27E-02 | 0.00E+00 | 6.03E-02 | -4.31E-01 |
| Use of secondary material | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | NR | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Use of renewable secondary fuels | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | NR | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Use of non-renewable secondary fuels | MJ | 0.00E+00 | 0.00E+00 | 0.00E+00 | NR | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Net use of fresh water (7.2.3) | m ³ | 1.10E-02 | 2.47E-05 | 1.28E-04 | NR | 0.00E+00 | 2.69E-06 | 0.00E+00 | 6.43E-05 | -1.97E-04 |

OTHER INDICATORS (Standard 7.2.5)

22. Biogenic carbon content table 9, 7.2.5 Unit (expressed per declared unit).

WOODEX AQUA CLASSIC

| Biogenic carbon content | Unit | A3 | A1-A3 | A4 | A5 | B1-B7 | C1 | C2 | C3 | C4 | D |
|--------------------------------------|------|----------|----------|----------|----------|-------|----------|----------|----------|----------|----------|
| Biogenic carbon content in product | kg C | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | NR | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Biogenic carbon content in packaging | kg C | 1.41E-02 | 1.41E-02 | 0.00E+00 | 0.00E+00 | NR | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

WOODEX AQUA WOOD OIL

| Biogenic carbon content | Unit | A3 | A1-A3 | A4 | A5 | B1-B7 | C1 | C2 | C3 | C4 | D |
|--------------------------------------|------|----------|----------|----------|----------|-------|----------|----------|----------|----------|----------|
| Biogenic carbon content in product | kg C | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | NR | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Biogenic carbon content in packaging | kg C | 1.28E-02 | 1.28E-02 | 0.00E+00 | 0.00E+00 | NR | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

WOODEX BIOLEUM

| Biogenic carbon content | Unit | A3 | A1-A3 | A4 | A5 | B1-B7 | C1 | C2 | C3 | C4 | D |
|--------------------------------------|------|----------|----------|----------|----------|-------|----------|----------|----------|----------|----------|
| Biogenic carbon content in product | kg C | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | NR | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Biogenic carbon content in packaging | kg C | 6.32E-03 | 6.32E-03 | 0.00E+00 | 0.00E+00 | NR | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

WOODEX PREMIUM

| Biogenic carbon content | Unit | A3 | A1-A3 | A4 | A5 | B1-B7 | C1 | C2 | C3 | C4 | D |
|--------------------------------------|------|----------|----------|----------|----------|-------|----------|----------|----------|----------|----------|
| Biogenic carbon content in product | kg C | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | NR | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Biogenic carbon content in packaging | kg C | 1.29E-02 | 1.29E-02 | 0.00E+00 | 0.00E+00 | NR | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

23. End of life - Waste

WOODEX AQUA CLASSIC

| Waste categories | Unit | A1-A3 | A4 | A5 | B1-B7 | C1 | C2 | C3 | C4 | D |
|------------------------------|------|----------|----------|----------|-------|----------|----------|----------|----------|----------|
| Hazardous waste disposed | kg | 4.97E-03 | 0.00E+00 | 9.15E-02 | NR | 0.00E+00 | 4.48E-01 | 0.00E+00 | 4.97E-03 | 0.00E+00 |
| Non-hazardous waste disposed | kg | 2.47E-02 | 0.00E+00 | 1.19E-01 | NR | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.47E-02 | 0.00E+00 |
| Radioactive waste disposed | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | NR | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

WOODEX AQUA WOOD OIL

| Waste categories | Unit | A1-A3 | A4 | A5 | B1-B7 | C1 | C2 | C3 | C4 | D |
|------------------------------|------|----------|----------|----------|-------|----------|----------|----------|----------|----------|
| Hazardous waste disposed | kg | 4.51E-03 | 0.00E+00 | 8.30E-02 | NR | 0.00E+00 | 4.07E-01 | 0.00E+00 | 4.51E-03 | 0.00E+00 |
| Non-hazardous waste disposed | kg | 2.24E-02 | 0.00E+00 | 1.15E-01 | NR | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.24E-02 | 0.00E+00 |
| Radioactive waste disposed | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | NR | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

WOODEX BIOLEUM

| Waste categories | Unit | A1-A3 | A4 | A5 | B1-B7 | C1 | C2 | C3 | C4 | D |
|------------------------------|------|----------|----------|----------|-------|----------|----------|----------|----------|----------|
| Hazardous waste disposed | kg | 2.22E-03 | 0.00E+00 | 4.09E-02 | NR | 0.00E+00 | 2.00E-01 | 0.00E+00 | 2.22E-03 | 0.00E+00 |
| Non-hazardous waste disposed | kg | 1.10E-02 | 0.00E+00 | 6.54E-02 | NR | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.10E-02 | 0.00E+00 |
| Radioactive waste disposed | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | NR | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

WOODEX PREMIUM

| Waste categories | Unit | A1-A3 | A4 | A5 | B1-B7 | C1 | C2 | C3 | C4 | D |
|------------------------------|------|----------|----------|----------|-------|----------|----------|----------|----------|----------|
| Hazardous waste disposed | kg | 4.52E-03 | 0.00E+00 | 8.32E-02 | NR | 0.00E+00 | 4.08E-01 | 0.00E+00 | 4.52E-03 | 0.00E+00 |
| Non-hazardous waste disposed | kg | 2.24E-02 | 0.00E+00 | 1.06E-01 | NR | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.24E-02 | 0.00E+00 |
| Radioactive waste disposed | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | NR | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

24. Other environmental indicators.
WOODEX AQUA CLASSIC

| Other environmental indicators | Unit | A1-A3 | A4 | A5 | B1-B7 | C1 | C2 | C3 | C4 | D |
|--------------------------------|------------------|----------|----------|----------|-------|----------|----------|----------|----------|----------|
| Components for reuse | kg | 0,00E+00 | 0,00E+00 | 0,00E+00 | NR | 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 | NR | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| Materials for energy recovery | kg | 0,00E+00 | 0,00E+00 | 0,00E+00 | NR | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| Exported energy (heat) | MJ/energy source | 0,00E+00 | 0,00E+00 | 0,00E+00 | NR | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |

WOODEX AQUA WOOD OIL

| Other environmental indicators | Unit | A1-A3 | A4 | A5 | B1-B7 | C1 | C2 | C3 | C4 | D |
|--------------------------------|------------------|----------|----------|----------|-------|----------|----------|----------|----------|----------|
| Components for reuse | kg | 0,00E+00 | 0,00E+00 | 0,00E+00 | NR | 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 | NR | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| Materials for energy recovery | kg | 0,00E+00 | 0,00E+00 | 0,00E+00 | NR | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| Exported energy (heat) | MJ/energy source | 0,00E+00 | 0,00E+00 | 0,00E+00 | NR | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |

WOODEX BIOLEUM

| Other environmental indicators | Unit | A1-A3 | A4 | A5 | B1-B7 | C1 | C2 | C3 | C4 | D |
|--------------------------------|------------------|----------|----------|----------|-------|----------|----------|----------|----------|----------|
| Components for reuse | kg | 0,00E+00 | 0,00E+00 | 0,00E+00 | NR | 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 | NR | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| Materials for energy recovery | kg | 0,00E+00 | 0,00E+00 | 0,00E+00 | NR | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| Exported energy (heat) | MJ/energy source | 0,00E+00 | 0,00E+00 | 0,00E+00 | NR | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |

WOODEX PREMIUM

| Other environmental indicators | Unit | A1-A3 | A4 | A5 | B1-B7 | C1 | C2 | C3 | C4 | D |
|--------------------------------|------------------|----------|----------|----------|-------|----------|----------|----------|----------|----------|
| Components for reuse | kg | 0,00E+00 | 0,00E+00 | 0,00E+00 | NR | 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 | NR | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| Materials for energy recovery | kg | 0,00E+00 | 0,00E+00 | 0,00E+00 | NR | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| Exported energy (heat) | MJ/energy source | 0,00E+00 | 0,00E+00 | 0,00E+00 | NR | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |

SCENARIOS AND ADDITIONAL TECHNICAL INFORMATION (Standard 7.3)
25. Energy in the manufacturing phase (Standard 7.3. A3)

| Parameter | Quantity | Data quality |
|---|--------------|---|
| A3 Electricity information and CO ₂ emission kg CO ₂ eq./kWh | 0.091 | Electricity has been calculated based on ecoinvent 3.8 database. The impacts include all upstream processes. |
| A3 District heating/cooling data quality and CO ₂ emissions kg CO ₂ eq./kWh | 0.014 | District heating has been calculated based on ecoinvent 3.8 database. The impacts include all upstream processes. |
| A3 Diesel CO ₂ emissions kg CO ₂ eq./kWh | 0.027 | Diesel has been calculated based on ecoinvent 3.8 database. The impacts include all upstream processes. |
| A3 Propane CO ₂ emissions kg CO ₂ eq./kWh | 0.025 | Propane has been calculated based on ecoinvent 3.8 database. The impacts include all upstream processes. |

Additional technical information, transport to the building site (Standard 7.3.2, A4)

| Parameter | Quantity | Data quality |
|---|----------|---|
| Fuel type and consumption of vehicle or vehicle type used for transport e.g. long distance truck, boat etc. Litre of fuel type per distance or vehicle type, Commission Directive 2007/37/EC (European Emission Standard) | | Default transportation mode and distances have been used in accordance with the PEFCR – Decorative Paint document version 1. Published by the Technical Secretariat Decorative Paints from the European Council of the Paint, Printing Ink and Artists' Colours Industry (CEPE) and reviewed in April 2018. |
| Distance (average distance of the transportation) km | - | Idem |
| Capacity utilisation % (including empty returns) | - | idem |
| Bulk density of transported products kg/m ³ | - | idem |
| Volume capacity utilisation factor (factor = 1 or <1 tai ≥ 1 for compressed or nested packaged products) | - | n/a |

26. End-of-life process description (7.3.4), module C

| Process flow | Unit (expressed per functional unit or per declared unit of components products or materials and by type of material) | Value kg/kg Data quality |
|---|---|-----------------------------|
| Collection process specified by type | kg collected separately | - |
| | kg collected with mixed construction waste | 1 |
| Recovery system specified by type | kg for re-use | - |
| | kg for recycling | - |
| | kg for energy recovery | 1 |
| Disposal specified by type | kg product or material for final deposition | - |
| Assumptions for scenario development, e.g. transportation | units as appropriate | - |

*These values are based on current estimation on end-of-life processes

27. Other technical information

| Technical information | N/mm ² |
|---|-------------------|
| Compressive strength in the direction of cause | n/a |
| Compressive strength in the direction of cause perpendicular to the | n/a |
| Tensile strength in the direction of cause | n/a |
| Bending strength | n/a |
| Modulus module | n/a |
| Shear | n/a |
| Density | n/a |

28. Additional information (Standard 7.4)
Emissions to soil

The information is not available

Emissions to water

The information is not available

Emissions to indoor air

During application VOC emissions are released.

29. Product information :

WOODEX is a waterborne coating for outdoor wooden surfaces. The coatings are manufactured in one location. It is sold mainly in Europe.

Application method: Brush or spray

Pack size:

WOODEX AQUA CLASSIC Clear: 0.9 L, 2.7 L, 9 L

WOODEX AQUA WOOD OIL: Clear: 0.9 L, 2.7 L, 9 L. Brown: 0.9 L, 2.7 L, 9 L. Grey: 0.9 L, 2.7 L, 9 L

WOODEX BIOLEUM: Clear and brown: 0.45 L, 0.9 L

WOODEX PREMIUM: 2.7 L, 9L

30. Reference of the common information

- EN 15804:2012+A2:2019 Sustainability of construction works. Environmental product declarations. Core rules for the product category of construction products, of 2019.
- ISO 14040/14044 on Life Cycle Assessments
- Product Environmental Footprint Category Rules - Decorative Paints version 1.0, 2018. Developed by the Technical Secretariat Decorative Paints of the European Council of the Paint, Printing Ink and Artists' Colours Industry.
- Sphera GaBi Software-System and Database for Life Cycle Engineering. Copyright 1992-2018 Sphera.
- Personal communication with Chloé Glotin, LCA specialist, Teknos, 2022.
- Raw materials LCI database for the European Council of the Paint, Printing Ink and Artists' Colours Industry (CEPE), version 3.0, IVL Swedish Environmental Research Institute, 2016

Wernet, G., Bauer, C., Steubing, B., Reinhard, J., Moreno-Ruiz, E., and Weidema, B., 2016. The ecoinvent database version 3 (part I): overview and methodology. The International Journal of Life Cycle Assessment, [online] 21(9), pp.1218–1230. Available at: <http://link.springer.com/10.1007/s11367-016-1087-8>

31. Product information (volunteer, verified information)

n/a