


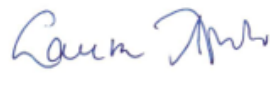


FUTURA AQUA



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:	FUTURA AQUA
Registration number:	RTS_221_23
Issue date:	08.05.2023
Valid to:	08.05.2028
Scope of the declaration	This environmental product declaration covers the environmental impacts of the FUTURA AQUA 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 091S

2. Product name and number

Product serie	Product name	Color
FUTURA AQUA	FUTURA AQUA PRIMER	White Base Paint 1, Base Paint 3
	FUTURA AQUA 5	White Base Paint 1, Base Paint 3
	FUTURA AQUA 20	White Base Paint 1, Base Paint 3, NCS-S0502-Y
	FUTURA AQUA 40	White Base Paint 1, Base Paint 3, NCS-S0500-Y, NCS-S0500-N
	FUTURA AQUA 90	White Base Paint 1, Base Paint 3

3. Place of production

Produced in Finland: Rajamäki.

4. Additional technical information

Further information can be found at:

FUTURA AQUA PRIMER: https://www.teknos.com/document/tds/FUTURA%20AQUA%20PRIMER_0912_TDS_en.pdf

FUTURA AQUA 5: https://www.teknos.com/document/tds/FUTURA%20AQUA%205_0912-00_TDS_en.pdf

FUTURA AQUA 20: https://www.teknos.com/document/tds/FUTURA%20AQUA%2020_0915_TDS_en.pdf

FUTURA AQUA 40: https://www.teknos.com/document/tds/FUTURA%20AQUA%2040_0914_TDS_en.pdf

FUTURA AQUA 90: https://www.teknos.com/document/tds/FUTURA%20AQUA%2090_0911-00_TDS_en.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.

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<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



FUTURA AQUA PRIMER: suitable indoors as an adhesion primer for wooden and building board surfaces as well as for non-rusting metal surfaces: doors, window casements, cabinets, mouldings, panels, panel ceilings, air ducts, radiators and piping systems. Indoors FUTURA AQUA PRIMER is also suitable for priming plaster and filler surfaces when the substrate must be especially durable and smooth: window sills and casings, and wall surfaces in special objects, e.g. staircases. Outdoors FUTURA AQUA PRIMER is suitable for priming wooden window casements, doors, balcony rails, garden furniture etc.



FUTURA AQUA 5: Indoors FUTURA AQUA 5 is suitable for primed and previously with alkyd paint painted wood, metal and building board surfaces: doors, window casements, cabinets, mouldings, panels, panel ceilings, air ducts, staircase railings, radiators and piping systems. Indoors FUTURA AQUA 5 is also suitable for plaster and filler surfaces primed with FUTURA AQUA PRIMER, for example window sills and casings, and wall surfaces in special objects, e.g. staircases. Outdoors FUTURA AQUA 5 is suitable for painting primed window casements, doors, garden furniture etc. Product meets the requirements of toy safety standard EN 71-3:2013 + A3:2018 for limit values for migration of chemical elements.



FUTURA AQUA 20: Indoors FUTURA AQUA 20 is suitable for primed and previously with alkyd paint painted wood, metal and building board surfaces: doors, window casements, cabinets, mouldings, panels, panel ceilings, air ducts, staircase railings, radiators and piping systems. Outdoors FUTURA AQUA 20 is suitable for painting primed window casements, doors, garden furniture etc. Indoors FUTURA AQUA 20 is also suitable for plaster and filler surfaces primed with FUTURA AQUA PRIMER, for example window sills and casings, and wall surfaces in special objects, e.g. staircases. Product meets the requirements of toy safety standard EN 71-3:2013 + A3:2018 for limit values for migration of chemical elements.



FUTURA AQUA 40: Indoors FUTURA AQUA 40 is suitable for primed and previously with alkyd paint painted wood, metal and building board surfaces: doors, window casements, cabinets, mouldings, panels, panel ceilings, air ducts, staircase railings, radiators and piping systems. Outdoors FUTURA AQUA 40 is suitable for painting primed window casements, doors, garden furniture etc. Indoors FUTURA AQUA 40 is also suitable for plaster and filler surfaces primed with FUTURA AQUA PRIMER, for example window sills and casings, and wall surfaces in special objects, e.g. staircases. Product meets the requirements of toy safety standard EN 71-3:2013 + A3:2018 for limit values for migration of chemical elements.



FUTURA AQUA 90: Indoors FUTURA AQUA 90 is suitable for primed and previously with alkyd paint painted wood, metal and building board surfaces: doors, window casements, cabinets, mouldings, panels, panel ceilings, air ducts, staircase railings, radiators and piping systems. Outdoors FUTURA AQUA 90 is suitable for painting primed window casements, doors, garden furniture etc. Indoors FUTURA AQUA 90 is also suitable for plaster and filler surfaces primed with FUTURA AQUA PRIMER, for example window sills and casings, and wall surfaces in special objects, e.g. staircases. Product meets the requirements of toy safety standard EN 71-3:2013 + A3:2018 for limit values for migration of chemical elements.

This EPD represents the highest environmental impact for the FUTURA AQUA PRIMER, FUTURA AQUA 5, FUTURA AQUA 20, FUTURA AQUA 40 and FUTURA AQUA 90 products.

10. Results of environmental information reported per kilogram

FUTURA AQUA 40

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	9.66E-01	4.17E+00	6.64E-02	4.65E-01	NR	0.00E+00	7.24E-03	0.00E+00	4.27E-01	-6.99E-02
Abiotic depletion potential for non-fossil resources (ADP-minerals&metals)	kg Sb eq./kg	6.39E-07	2.03E-05	1.53E-07	9.10E-07	NR	0.00E+00	1.67E-08	0.00E+00	2.37E-07	-4.45E-08
Abiotic depletion for fossil resources potential (ADP-fossil)	MJ. Net calorific value/kg	1.26E+01	7.08E+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	2.55E+01	5.31E-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

FUTURA AQUA 20

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	1.02E+00	4.31E+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	6.41E-07	6.89E-04	1.53E-07	9.11E-07	NR	0.00E+00	1.67E-08	0.00E+00	2.36E-07	-4.45E-08
Abiotic depletion for fossil resources potential (ADP-fossil)	MJ. Net calorific value/kg	1.31E+01	7.27E+01	1.04E+00	2.65E+00	NR	0.00E+00	1.13E-01	0.00E+00	2.01E+00	-1.38E+00
Water (user) deprivation potential, deprivation-weighted water consumption (WDP)	M3world eq. deprived/kg	2.12E-01	1.89E+01	5.31E-03	3.86E-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

FUTURA AQUA 5

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	9.95E-01	4.45E+00	6.63E-02	4.65E-01	NR	0.00E+00	7.23E-03	0.00E+00	4.27E-01	-6.99E-02
Abiotic depletion potential for non-fossil resources (ADP-minerals&metals)	kg Sb eq./kg	6.33E-07	1.16E-03	1.53E-07	9.09E-07	NR	0.00E+00	1.67E-08	0.00E+00	2.36E-07	-4.45E-08
Abiotic depletion for fossil resources potential (ADP-fossil)	MJ. Net calorific value/kg	1.28E+01	7.63E+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	2.15E-01	5.81E+00	5.31E-03	3.86E-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

FUTURA AQUA 90

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	9.60E-01	4.86E+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	6.38E-07	1.01E-03	1.53E-07	9.09E-07	NR	0.00E+00	1.66E-08	0.00E+00	2.37E-07	-4.45E-08
Abiotic depletion for fossil resources potential (ADP-fossil)	MJ. Net calorific value/kg	1.25E+01	8.21E+01	1.04E+00	2.65E+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	2.18E-01	4.13E+00	5.31E-03	3.87E-02	NR	0.00E+00	5.77E-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

FUTURA AQUA PRIMER

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	9.60E-01	3.39E+00	6.64E-02	4.65E-01	NR	0.00E+00	7.22E-03	0.00E+00	4.27E-01	-7.00E-02
Abiotic depletion potential for non-fossil resources (ADP-minerals&metals)	kg Sb eq./kg	6.43E-07	1.60E-05	1.53E-07	9.10E-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	1.25E+01	5.68E+01	1.04E+00	2.65E+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	2.18E-01	1.84E+01	5.31E-03	3.87E-02	NR	0.00E+00	5.77E-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

11. Description of product and its use

FUTURA AQUA PRIMER is a durable water-borne, full-matt, alkyd based adhesion primer. For wooden surfaces indoors and outdoors as well as for zinc coated, galvanized and previously painted metal surfaces indoors. Ideal application properties.

FUTURA AQUA 5 is a durable water-borne urethane alkyd based top coat for detached and fixed furniture indoors and outdoors. Ideal application properties. Excellent scratch and wear resistance. The painted surface is easy to keep clean. Finish: matt.

FUTURA AQUA 20 is a water-borne urethane alkyd based top coat for detached and fixed furniture indoors and outdoors. Finish: semi-matt.

FUTURA AQUA 40 is a water-borne urethane alkyd based top coat for detached and fixed furniture indoors and outdoors. Finish: semigloss.

FUTURA AQUA 90 is a durable water-borne urethane alkyd based top coat for detached and fixed furniture indoors and outdoors. Ideal application properties. Excellent scratch and wear resistance. The painted surface is easy to keep clean. Finish: full gloss.

Product standards (c-PCR)

c-PCR is not used in the calculations.

12. Physical properties

FUTURA AQUA is a waterborne coating for indoors and outdoors furniture for wood, metal and building boards surfaces. It covers 8-10 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-instsallation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse	Recovery	Recycling

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
FUTURA AQUA 40	3.10E-01
FUTURA AQUA 20	3.14E-01
FUTURA AQUA 5	2.78E-01
FUTURA AQUA 90	3.11E-01
FUTURA AQUA PRIMER	3.37E-01

16. System boundary

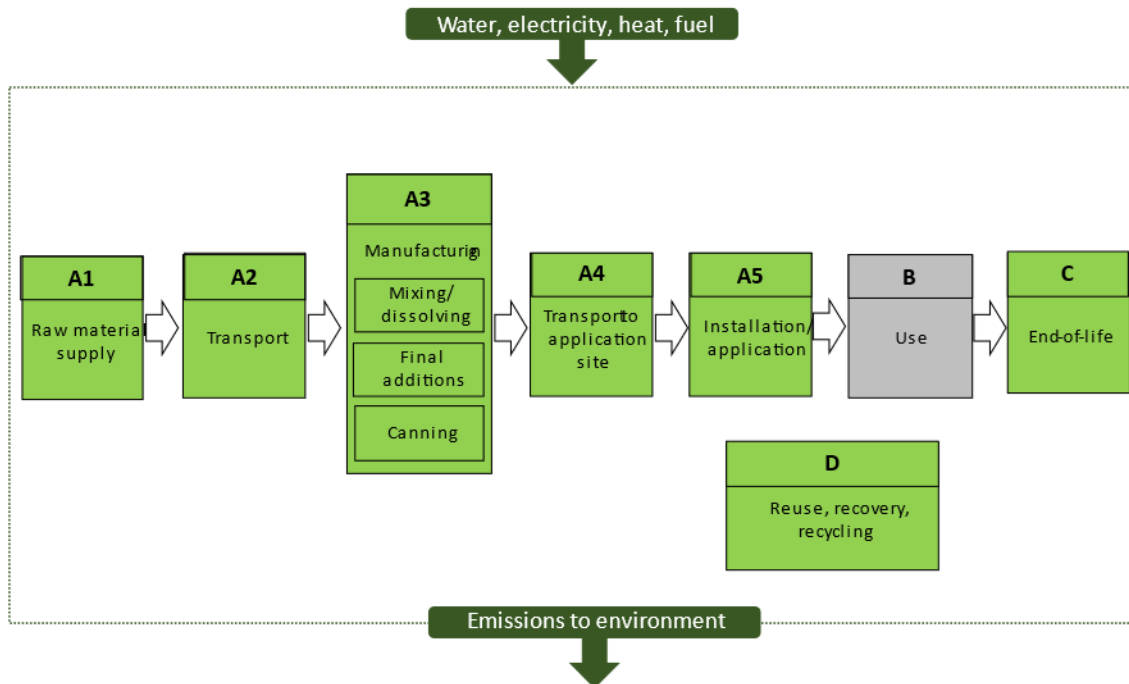
This LCA is a Cradle-to-Grave with options. All major steps, from the extraction of natural resources to the final disposal of the product, are included in the scope of the study. The life cycle stages included are A1-A5, C2 and C4 and D. The use stage, B, is not considered in this study, since no impact 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 PEFCE 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 FUTURA AQUA 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 FUTURA AQUA 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.

FUTURA AQUA 40

Indicators	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Global Warming Potential total (GWP-total)	kg CO ₂ ekv	1.29E+00	2.06E-02	1.44E-01	NR	0.00E+00	2.24E-03	0.00E+00	1.32E-01	-2.17E-02
Global Warming Potential fossil fuels (GWP-fossil)	kg CO ₂ ekv	1.31E+00	2.05E-02	1.27E-01	NR	0.00E+00	2.23E-03	0.00E+00	1.32E-01	-2.06E-02
Global Warming Potential biogenic (GWP-biogenic)	kg CO ₂ ekv	-2.69E-02	7.46E-05	1.74E-02	NR	0.00E+00	8.13E-06	0.00E+00	9.93E-05	-1.02E-03
Global Warming Potential land use and land use change (GWP-luluc)	kg CO ₂ ekv	6.04E-03	7.66E-06	2.29E-05	NR	0.00E+00	8.35E-07	0.00E+00	6.39E-06	-2.50E-05
Depletion potential of the stratospheric ozone layer (ODP)	kg CFC 11 ekv	1.53E-07	4.93E-09	1.53E-08	NR	0.00E+00	5.37E-10	0.00E+00	1.02E-08	-2.10E-09
Acidification potential, Accumulated Exceedance (AP)	mol H ⁺ eqv	6.68E-03	1.04E-04	2.16E-04	NR	0.00E+00	1.14E-05	0.00E+00	1.36E-04	-6.51E-05
Eutrophication potential, fraction of nutrients reaching freshwater end compartment (EP-freshwater)	kg PO ₄ -ekv	3.50E-04	1.29E-06	7.84E-06	NR	0.00E+00	1.40E-07	0.00E+00	1.48E-06	-1.05E-05
Eutrophication potential, fraction of nutrients reaching marine end compartment (EP-marine)	kg N ekv.	1.36E-03	3.58E-05	4.40E-05	NR	0.00E+00	3.90E-06	0.00E+00	2.29E-05	-1.25E-05
Eutrophication potential, Accumulated Exceedance (EP-terrestrial)	mol N ekv.	1.16E-02	3.91E-04	4.42E-04	NR	0.00E+00	4.26E-05	0.00E+00	2.53E-04	-1.14E-04
Formation potential of tropospheric ozone (POCP)	kg NMVOC eq.	8.99E-03	1.17E-04	1.31E-04	NR	0.00E+00	1.27E-05	0.00E+00	8.07E-05	-3.33E-05
Abiotic depletion potential for non-fossil resources (ADP-minerals&metals)	kg Sb eq.	6.29E-06	4.74E-08	2.82E-07	NR	0.00E+00	5.16E-09	0.00E+00	7.33E-08	-1.38E-08
Abiotic depletion for fossil resources potential (ADP-fossil)	MJ. Net calorific value	2.19E+01	3.23E-01	8.22E-01	NR	0.00E+00	3.52E-02	0.00E+00	6.21E-01	-4.28E-01
Water (user) deprivation potential, deprivation-weighted water consumption (WDP)	M3world eq. deprived	7.90E+00	1.65E-03	1.20E-02	NR	0.00E+00	1.79E-04	0.00E+00	4.15E-03	-8.41E-03

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Indicators	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Global Warming Potential total (GWP-total)	kg CO ₂ ekv	1.35E+00	2.08E-02	1.46E-01	NR	0.00E+00	2.27E-03	0.00E+00	1.34E-01	-2.19E-02
Global Warming Potential fossil fuels (GWP-fossil)	kg CO ₂ ekv	1.37E+00	2.08E-02	1.28E-01	NR	0.00E+00	2.26E-03	0.00E+00	1.34E-01	-2.09E-02
Global Warming Potential biogenic (GWP-biogenic)	kg CO ₂ ekv	-2.09E-02	7.58E-05	1.77E-02	NR	0.00E+00	8.25E-06	0.00E+00	1.01E-04	-1.04E-03
Global Warming Potential land use and land use change (GWP-luluc)	kg CO ₂ ekv	3.31E-03	7.76E-06	2.33E-05	NR	0.00E+00	8.44E-07	0.00E+00	6.47E-06	-2.53E-05
Depletion potential of the stratospheric ozone layer (ODP)	kg CFC 11 ekv	1.74E-07	4.99E-09	1.55E-08	NR	0.00E+00	5.43E-10	0.00E+00	1.04E-08	-2.13E-09
Acidification potential, Accumulated Exceedance (AP)	mol H ⁺ eqv	6.84E-03	1.05E-04	2.19E-04	NR	0.00E+00	1.15E-05	0.00E+00	1.38E-04	-6.60E-05
Eutrophication potential, fraction of nutrients reaching freshwater end compartment (EP-freshwater)	kg PO ₄ -ekv	3.52E-04	1.30E-06	7.99E-06	NR	0.00E+00	1.42E-07	0.00E+00	1.50E-06	-1.06E-05
Eutrophication potential, fraction of nutrients reaching marine end compartment (EP-marine)	kg N ekv.	1.25E-03	3.62E-05	4.47E-05	NR	0.00E+00	3.94E-06	0.00E+00	2.32E-05	-1.27E-05
Eutrophication potential, Accumulated Exceedance (EP-terrestrial)	mol N ekv.	1.13E-02	3.96E-04	4.50E-04	NR	0.00E+00	4.31E-05	0.00E+00	2.56E-04	-1.16E-04
Formation potential of tropospheric ozone (POCP)	kg NMVOC eq.	8.97E-03	1.18E-04	1.34E-04	NR	0.00E+00	1.29E-05	0.00E+00	8.18E-05	-3.37E-05
Abiotic depletion potential for non-fossil resources (ADP-minerals&metals)	kg Sb eq.	1.84E-04	4.08E-08	2.43E-07	NR	0.00E+00	4.44E-09	0.00E+00	6.31E-08	-1.19E-08
Abiotic depletion for fossil resources potential (ADP-fossil)	MJ. Net calorific value	2.28E+01	3.27E-01	8.34E-01	NR	0.00E+00	3.56E-02	0.00E+00	6.30E-01	-4.34E-01
Water (user) deprivation potential, deprivation-weighted water consumption (WDP)	M3world eq. deprived	5.04E+00	1.42E-03	1.03E-02	NR	0.00E+00	1.54E-04	0.00E+00	3.57E-03	-7.25E-03

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Indicators	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Global Warming Potential total (GWP-total)	kg CO ₂ ekv	1.24E+00	1.84E-02	1.29E-01	NR	0.00E+00	2.01E-03	0.00E+00	1.19E-01	-1.95E-02
Global Warming Potential fossil fuels (GWP-fossil)	kg CO ₂ ekv	1.25E+00	1.84E-02	1.14E-01	NR	0.00E+00	2.00E-03	0.00E+00	1.19E-01	-1.85E-02
Global Warming Potential biogenic (GWP-biogenic)	kg CO ₂ ekv	-7.86E-03	6.71E-05	1.57E-02	NR	0.00E+00	7.32E-06	0.00E+00	8.94E-05	-9.21E-04
Global Warming Potential land use and land use change (GWP-luluc)	kg CO ₂ ekv	6.62E-04	6.87E-06	2.07E-05	NR	0.00E+00	7.49E-07	0.00E+00	5.74E-06	-2.24E-05
Depletion potential of the stratospheric ozone layer (ODP)	kg CFC 11 ekv	1.72E-07	4.42E-09	1.37E-08	NR	0.00E+00	4.82E-10	0.00E+00	9.18E-09	-1.88E-09
Acidification potential, Accumulated Exceedance (AP)	mol H ⁺ eqv	6.19E-03	9.34E-05	1.94E-04	NR	0.00E+00	1.02E-05	0.00E+00	1.22E-04	-5.84E-05
Eutrophication potential, fraction of nutrients reaching freshwater end compartment (EP-freshwater)	kg PO ₄ -ekv	3.17E-04	1.15E-06	7.07E-06	NR	0.00E+00	1.26E-07	0.00E+00	1.33E-06	-9.42E-06
Eutrophication potential, fraction of nutrients reaching marine end compartment (EP-marine)	kg N ekv.	1.27E-03	3.07E-05	3.78E-05	NR	0.00E+00	3.34E-06	0.00E+00	1.96E-05	-1.07E-05
Eutrophication potential, Accumulated Exceedance (EP-terrestrial)	mol N ekv.	1.00E-02	3.51E-04	3.98E-04	NR	0.00E+00	3.82E-05	0.00E+00	2.27E-04	-1.03E-04
Formation potential of tropospheric ozone (POCP)	kg NMVOC eq.	7.94E-03	1.05E-04	1.18E-04	NR	0.00E+00	1.14E-05	0.00E+00	7.25E-05	-2.99E-05
Abiotic depletion potential for non-fossil resources (ADP-minerals&metals)	kg Sb eq.	3.10E-04	4.06E-08	2.42E-07	NR	0.00E+00	4.43E-09	0.00E+00	6.29E-08	-1.18E-08
Abiotic depletion for fossil resources potential (ADP-fossil)	MJ. Net calorific value	2.12E+01	2.90E-01	7.39E-01	NR	0.00E+00	3.16E-02	0.00E+00	5.58E-01	-3.84E-01
Water (user) deprivation potential, deprivation-weighted water consumption (WDP)	M3world eq. deprived	1.54E+00	1.41E-03	1.03E-02	NR	0.00E+00	1.54E-04	0.00E+00	3.56E-03	-7.22E-03

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Indicators	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Global Warming Potential total (GWP-total)	kg CO ₂ ekv	1.51E+00	2.06E-02	1.44E-01	NR	0.00E+00	2.24E-03	0.00E+00	1.33E-01	-2.17E-02
Global Warming Potential fossil fuels (GWP-fossil)	kg CO ₂ ekv	1.52E+00	2.06E-02	1.27E-01	NR	0.00E+00	2.23E-03	0.00E+00	1.33E-01	-2.07E-02
Global Warming Potential biogenic (GWP-biogenic)	kg CO ₂ ekv	-1.11E-02	7.51E-05	1.75E-02	NR	0.00E+00	8.16E-06	0.00E+00	9.99E-05	-1.03E-03
Global Warming Potential land use and land use change (GWP-luluc)	kg CO ₂ ekv	8.05E-04	7.68E-06	2.30E-05	NR	0.00E+00	8.35E-07	0.00E+00	6.40E-06	-2.51E-05
Depletion potential of the stratospheric ozone layer (ODP)	kg CFC 11 ekv	2.18E-07	4.95E-09	1.53E-08	NR	0.00E+00	5.38E-10	0.00E+00	1.02E-08	-2.10E-09
Acidification potential, Accumulated Exceedance (AP)	mol H ⁺ eqv	7.67E-03	1.04E-04	2.16E-04	NR	0.00E+00	1.14E-05	0.00E+00	1.36E-04	-6.53E-05
Eutrophication potential, fraction of nutrients reaching freshwater end compartment (EP-freshwater)	kg PO ₄ -ekv	4.07E-04	1.29E-06	7.86E-06	NR	0.00E+00	1.40E-07	0.00E+00	1.49E-06	-1.05E-05
Eutrophication potential, fraction of nutrients reaching marine end compartment (EP-marine)	kg N ekv.	1.25E-03	3.59E-05	4.40E-05	NR	0.00E+00	3.90E-06	0.00E+00	2.29E-05	-1.25E-05
Eutrophication potential, Accumulated Exceedance (EP-terrestrial)	mol N ekv.	1.19E-02	3.92E-04	4.43E-04	NR	0.00E+00	4.26E-05	0.00E+00	2.54E-04	-1.15E-04
Formation potential of tropospheric ozone (POCP)	kg NMVOC eq.	9.24E-03	1.17E-04	1.32E-04	NR	0.00E+00	1.27E-05	0.00E+00	8.09E-05	-3.34E-05
Abiotic depletion potential for non-fossil resources (ADP-minerals&metals)	kg Sb eq.	3.15E-04	4.75E-08	2.83E-07	NR	0.00E+00	5.17E-09	0.00E+00	7.35E-08	-1.38E-08
Abiotic depletion for fossil resources potential (ADP-fossil)	MJ. Net calorific value	2.55E+01	3.24E-01	8.24E-01	NR	0.00E+00	3.52E-02	0.00E+00	6.23E-01	-4.29E-01
Water (user) deprivation potential, deprivation-weighted water consumption (WDP)	M3world eq. deprived	1.28E+00	1.65E-03	1.20E-02	NR	0.00E+00	1.79E-04	0.00E+00	4.16E-03	-8.44E-03

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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	2.24E-02	1.57E-01	NR	0.00E+00	2.43E-03	0.00E+00	1.44E-01	-2.36E-02
Global Warming Potential fossil fuels (GWP-fossil)	kg CO ₂ ekv	1.17E+00	2.23E-02	1.38E-01	NR	0.00E+00	2.42E-03	0.00E+00	1.44E-01	-2.24E-02
Global Warming Potential biogenic (GWP-biogenic)	kg CO ₂ ekv	-2.89E-02	8.14E-05	1.90E-02	NR	0.00E+00	8.85E-06	0.00E+00	1.08E-04	-1.12E-03
Global Warming Potential land use and land use change (GWP-luluc)	kg CO ₂ ekv	4.79E-03	8.32E-06	2.49E-05	NR	0.00E+00	9.05E-07	0.00E+00	6.94E-06	-2.72E-05
Depletion potential of the stratospheric ozone layer (ODP)	kg CFC 11 ekv	1.35E-07	5.36E-09	1.66E-08	NR	0.00E+00	5.83E-10	0.00E+00	1.11E-08	-2.28E-09
Acidification potential, Accumulated Exceedance (AP)	mol H ⁺ eqv	5.75E-03	1.13E-04	2.35E-04	NR	0.00E+00	1.23E-05	0.00E+00	1.48E-04	-7.08E-05
Eutrophication potential, fraction of nutrients reaching freshwater end compartment (EP-freshwater)	kg PO ₄ -ekv	2.93E-04	1.40E-06	8.52E-06	NR	0.00E+00	1.52E-07	0.00E+00	1.61E-06	-1.14E-05
Eutrophication potential, fraction of nutrients reaching marine end compartment (EP-marine)	kg N ekv.	1.17E-03	3.89E-05	4.78E-05	NR	0.00E+00	4.23E-06	0.00E+00	2.48E-05	-1.36E-05
Eutrophication potential, Accumulated Exceedance (EP-terrestrial)	mol N ekv.	1.01E-02	4.25E-04	4.81E-04	NR	0.00E+00	4.62E-05	0.00E+00	2.75E-04	-1.24E-04
Formation potential of tropospheric ozone (POCP)	kg NMVOC eq.	8.86E-03	1.27E-04	1.43E-04	NR	0.00E+00	1.38E-05	0.00E+00	8.76E-05	-3.62E-05
Abiotic depletion potential for non-fossil resources (ADP-minerals&metals)	kg Sb eq.	5.37E-06	5.15E-08	3.07E-07	NR	0.00E+00	5.60E-09	0.00E+00	7.96E-08	-1.50E-08
Abiotic depletion for fossil resources potential (ADP-fossil)	MJ. Net calorific value	1.91E+01	3.51E-01	8.93E-01	NR	0.00E+00	3.82E-02	0.00E+00	6.75E-01	-4.66E-01
Water (user) deprivation potential, deprivation-weighted water consumption (WDP)	M3world eq. deprived	6.20E+00	1.79E-03	1.30E-02	NR	0.00E+00	1.94E-04	0.00E+00	4.50E-03	-9.16E-03

20. Standard 7.2.3.2 Additional environmental impact indicators (voluntary information).
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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	8.94E-08	1.90E-09	1.87E-09	NR	0.00E+00	2.07E-10	0.00E+00	1.30E-09	-1.81E-10
Potential Human exposure efficiency relative to U235 (IRP)	kBq U235 eq.	1.62E-01	1.63E-03	4.47E-03	NR	0.00E+00	1.77E-04	0.00E+00	2.97E-03	-6.22E-03
Potential Comparative Toxic Unit for ecosystems (ETP-fw)	CTUh	5.00E+01	2.61E-01	6.45E+01	NR	0.00E+00	2.84E-02	0.00E+00	5.82E-01	-1.30E-01
Potential Comparative Toxic Unit for humans (HTP-c)	CTUh	1.17E-09	6.95E-12	2.95E-11	NR	0.00E+00	7.58E-13	0.00E+00	2.57E-10	-3.81E-12
Potential Comparative Toxic Unit for humans (HTP-nc)	CTUh	4.57E-08	2.39E-10	1.93E-09	NR	0.00E+00	2.60E-11	0.00E+00	4.75E-10	-1.15E-10
Potential soil quality index (SQP)	Dimensionless	1.45E+01	3.68E-01	2.19E-01	NR	0.00E+00	4.01E-02	0.00E+00	1.61E-01	-3.60E-02

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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	8.94E-08	1.90E-09	1.87E-09	NR	0.00E+00	2.07E-10	0.00E+00	1.30E-09	-1.81E-10
Potential Human exposure efficiency relative to U235 (IRP)	kBq U235 eq.	5.00E+01	2.61E-01	6.49E+01	NR	0.00E+00	2.84E-02	0.00E+00	5.82E-01	-1.30E-01
Potential Comparative Toxic Unit for ecosystems (ETP-fw)	CTUh	5.00E+01	2.61E-01	6.45E+01	NR	0.00E+00	2.84E-02	0.00E+00	5.82E-01	-1.30E-01
Potential Comparative Toxic Unit for humans (HTP-c)	CTUh	1.17E-09	6.95E-12	2.95E-11	NR	0.00E+00	7.58E-13	0.00E+00	2.57E-10	-3.81E-12
Potential Comparative Toxic Unit for humans (HTP-nc)	CTUh	4.57E-08	2.39E-10	1.93E-09	NR	0.00E+00	2.60E-11	0.00E+00	4.75E-10	-1.15E-10
Potential soil quality index (SQP)	Dimensionless	1.45E+01	3.68E-01	2.19E-01	NR	0.00E+00	4.01E-02	0.00E+00	1.61E-01	-3.60E-02

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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	9.76E-08	1.63E-09	1.61E-09	NR	0.00E+00	1.78E-10	0.00E+00	1.11E-09	-1.55E-10
Potential Human exposure efficiency relative to U235 (IRP)	kBq U235 eq.	1.53E-01	1.46E-03	4.01E-03	NR	0.00E+00	1.59E-04	0.00E+00	2.67E-03	-5.59E-03
Potential Comparative Toxic Unit for ecosystems (ETP-fw)	CTUh	3.08E+01	2.34E-01	7.39E+01	NR	0.00E+00	2.55E-02	0.00E+00	5.22E-01	-1.16E-01
Potential Comparative Toxic Unit for humans (HTP-c)	CTUh	1.84E-09	6.23E-12	2.65E-11	NR	0.00E+00	6.80E-13	0.00E+00	2.31E-10	-3.42E-12
Potential Comparative Toxic Unit for humans (HTP-nc)	CTUh	3.72E-08	2.14E-10	2.00E-09	NR	0.00E+00	2.33E-11	0.00E+00	4.26E-10	-1.03E-10
Potential soil quality index (SQP)	Dimensionless	1.72E+01	3.16E-01	1.89E-01	NR	0.00E+00	3.44E-02	0.00E+00	1.38E-01	-3.09E-02

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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	1.01E-07	1.91E-09	1.88E-09	NR	0.00E+00	2.07E-10	0.00E+00	1.30E-09	-1.81E-10
Potential Human exposure efficiency relative to U235 (IRP)	kBq U235 eq.	1.93E-01	1.63E-03	4.48E-03	NR	0.00E+00	1.78E-04	0.00E+00	2.98E-03	-6.24E-03
Potential Comparative Toxic Unit for ecosystems (ETP-fw)	CTUh	3.82E+01	2.62E-01	9.47E+01	NR	0.00E+00	2.84E-02	0.00E+00	5.83E-01	-1.30E-01
Potential Comparative Toxic Unit for humans (HTP-c)	CTUh	1.12E-09	6.97E-12	2.96E-11	NR	0.00E+00	7.58E-13	0.00E+00	2.58E-10	-3.82E-12
Potential Comparative Toxic Unit for humans (HTP-nc)	CTUh	4.79E-08	2.39E-10	2.44E-09	NR	0.00E+00	2.60E-11	0.00E+00	4.76E-10	-1.15E-10
Potential soil quality index (SQP)	Dimensionless	1.14E+01	3.69E-01	2.19E-01	NR	0.00E+00	4.01E-02	0.00E+00	1.61E-01	-3.61E-02

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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	7.74E-08	2.07E-09	2.04E-09	NR	0.00E+00	2.25E-10	0.00E+00	1.41E-09	-1.97E-10
Potential Human exposure efficiency relative to U235 (IRP)	kBq U235 eq.	1.63E-01	1.77E-03	4.86E-03	NR	0.00E+00	1.92E-04	0.00E+00	3.22E-03	-6.77E-03
Potential Comparative Toxic Unit for ecosystems (ETP-fw)	CTUh	4.17E+01	2.83E-01	8.34E+01	NR	0.00E+00	3.08E-02	0.00E+00	6.32E-01	-1.41E-01
Potential Comparative Toxic Unit for humans (HTP-c)	CTUh	9.94E-10	7.56E-12	3.21E-11	NR	0.00E+00	8.22E-13	0.00E+00	2.79E-10	-4.14E-12
Potential Comparative Toxic Unit for humans (HTP-nc)	CTUh	3.94E-08	2.59E-10	2.34E-09	NR	0.00E+00	2.82E-11	0.00E+00	5.16E-10	-1.25E-10
Potential soil quality index (SQP)	Dimensionless	1.28E+01	4.00E-01	2.38E-01	NR	0.00E+00	4.35E-02	0.00E+00	1.75E-01	-3.92E-02

21. Standard 7.2.4 Use of natural resources
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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	6.60E+00	4.11E-03	1.27E-02	NR	0.00E+00	4.48E-04	0.00E+00	3.97E-04	-3.06E-02
Renewable primary energy resources used as raw materials	MJ	1.14E-02	1.92E-09	2.74E-09	NR	0.00E+00	2.09E-10	0.00E+00	9.49E-10	-1.14E-09
Total use of renewable primary energy resources	MJ	6.61E+00	4.11E-03	1.27E-02	NR	0.00E+00	4.48E-04	0.00E+00	3.97E-04	-3.06E-02
Use of non renewable primary energy excluding non renewable primary energy resources used as raw materials	MJ	1.98E+01	3.23E-01	5.79E-01	NR	0.00E+00	3.52E-02	0.00E+00	4.58E-02	-3.27E-01
Non renewable primary energy resources used as raw materials	MJ	2.13E-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	1.99E+01	3.23E-01	5.79E-01	NR	0.00E+00	3.52E-02	0.00E+00	4.58E-02	-3.27E-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)	m3	3.82E-02	3.83E-05	1.98E-04	NR	0.00E+00	4.17E-06	0.00E+00	0.00E+00	-1.50E-04

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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	7.36E+00	4.17E-03	1.29E-02	NR	0.00E+00	4.54E-04	0.00E+00	4.02E-04	-3.11E-02
Renewable primary energy resources used as raw materials	MJ	1.15E-02	1.94E-09	2.82E-09	NR	0.00E+00	2.12E-10	0.00E+00	9.61E-10	-1.15E-09
Total use of renewable primary energy resources	MJ	7.37E+00	4.17E-03	1.29E-02	NR	0.00E+00	4.54E-04	0.00E+00	4.02E-04	-3.11E-02
Use of non renewable primary energy excluding non renewable primary energy resources used as raw materials	MJ	1.67E+01	3.27E-01	5.88E-01	NR	0.00E+00	3.56E-02	0.00E+00	4.64E-02	-3.31E-01
Non renewable primary energy resources used as raw materials	MJ	2.28E-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	1.77E+01	3.27E-01	5.88E-01	NR	0.00E+00	3.56E-02	0.00E+00	4.64E-02	-3.31E-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)	m3	6.69E-02	3.88E-05	2.01E-04	NR	0.00E+00	4.23E-06	0.00E+00	0.00E+00	-1.52E-04

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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	6.14E+00	3.69E-03	1.14E-02	NR	0.00E+00	4.02E-04	0.00E+00	3.56E-04	-2.75E-02
Renewable primary energy resources used as raw materials	MJ	1.05E-02	1.72E-09	2.48E-09	NR	0.00E+00	1.87E-10	0.00E+00	8.51E-10	-1.02E-09
Total use of renewable primary energy resources	MJ	6.15E+00	3.69E-03	1.14E-02	NR	0.00E+00	4.02E-04	0.00E+00	3.56E-04	-2.75E-02
Use of non renewable primary energy excluding non renewable primary energy resources used as raw materials	MJ	1.33E+01	2.90E-01	5.20E-01	NR	0.00E+00	3.16E-02	0.00E+00	4.11E-02	-2.93E-01
Non renewable primary energy resources used as raw materials	MJ	1.54E-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	1.47E+01	2.90E-01	5.20E-01	NR	0.00E+00	3.16E-02	0.00E+00	4.11E-02	-2.93E-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)	m3	7.02E-02	3.43E-05	1.78E-04	NR	0.00E+00	3.74E-06	0.00E+00	0.00E+00	-1.34E-04

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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	8.64E+00	4.13E-03	1.27E-02	NR	0.00E+00	4.49E-04	0.00E+00	3.98E-04	-3.07E-02
Renewable primary energy resources used as raw materials	MJ	1.14E-02	1.92E-09	2.75E-09	NR	0.00E+00	2.10E-10	0.00E+00	9.52E-10	-1.14E-09
Total use of renewable primary energy resources	MJ	8.65E+00	4.13E-03	1.27E-02	NR	0.00E+00	4.49E-04	0.00E+00	3.98E-04	-3.07E-02
Use of non renewable primary energy excluding non renewable primary energy resources used as raw materials	MJ	1.51E+01	3.24E-01	5.80E-01	NR	0.00E+00	3.53E-02	0.00E+00	4.59E-02	-3.28E-01
Non renewable primary energy resources used as raw materials	MJ	1.85E-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	1.71E+01	3.24E-01	5.80E-01	NR	0.00E+00	3.53E-02	0.00E+00	4.59E-02	-3.28E-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)	m3	9.75E-02	3.84E-05	1.99E-04	NR	0.00E+00	4.19E-06	0.00E+00	0.00E+00	-1.50E-04

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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	5.33E+00	4.47E-03	1.38E-02	NR	0.00E+00	4.87E-04	0.00E+00	4.32E-04	-3.33E-02
Renewable primary energy resources used as raw materials	MJ	1.23E-02	2.09E-09	2.98E-09	NR	0.00E+00	2.27E-10	0.00E+00	1.03E-09	-1.24E-09
Total use of renewable primary energy resources	MJ	5.34E+00	4.47E-03	1.38E-02	NR	0.00E+00	4.87E-04	0.00E+00	4.32E-04	-3.33E-02
Use of non renewable primary energy excluding non renewable primary energy resources used as raw materials	MJ	1.77E+01	3.51E-01	6.29E-01	NR	0.00E+00	3.83E-02	0.00E+00	4.98E-02	-3.55E-01
Non renewable primary energy resources used as raw materials	MJ	1.22E-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	1.77E+01	3.51E-01	6.29E-01	NR	0.00E+00	3.83E-02	0.00E+00	4.98E-02	-3.55E-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)	m3	2.89E-02	4.16E-05	2.16E-04	NR	0.00E+00	4.54E-06	0.00E+00	0.00E+00	-1.63E-04

OTHER INDICATORS (Standard 7.2.5)
22. Biogenic carbon content table 9, 7.2.5 Unit (expressed per declared unit).
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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	9.77E-03	9.77E-03	0.00E+00	0.00E+00	NR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

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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	9.90E-03	9.90E-03	0.00E+00	0.00E+00	NR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

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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	8.77E-03	8.77E-03	0.00E+00	0.00E+00	NR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

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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	9.80E-03	9.80E-03	0.00E+00	0.00E+00	NR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

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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	1.06E-02	1.06E-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
FUTURA AQUA 40

Waste categories	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Hazardous waste disposed	kg	3.43E-03	0.00E+00	6.32E-02	NR	0.00E+00	0.00E+00	0.00E+00	3.10E-01	0.00E+00
Non-hazardous waste disposed	kg	1.70E-02	0.00E+00	8.03E-02	NR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	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

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Waste categories	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Hazardous waste disposed	kg	3.48E-03	0.00E+00	6.63E-02	NR	0.00E+00	0.00E+00	0.00E+00	3.25E-01	0.00E+00
Non-hazardous waste disposed	kg	1.73E-02	0.00E+00	7.12E-02	NR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	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

FUTURA AQUA 5

Waste categories	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Hazardous waste disposed	kg	3.08E-03	0.00E+00	5.68E-02	NR	0.00E+00	0.00E+00	0.00E+00	2.78E-01	0.00E+00
Non-hazardous waste disposed	kg	1.53E-02	0.00E+00	7.57E-02	NR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	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

FUTURA AQUA 90

Waste categories	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Hazardous waste disposed	kg	3.44E-03	0.00E+00	6.34E-02	NR	0.00E+00	0.00E+00	0.00E+00	3.11E-01	0.00E+00
Non-hazardous waste disposed	kg	1.71E-02	0.00E+00	8.04E-02	NR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	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

FUTURA AQUA PRIMER

Waste categories	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Hazardous waste disposed	kg	3.73E-03	0.00E+00	6.87E-02	NR	0.00E+00	0.00E+00	0.00E+00	3.37E-01	0.00E+00
Non-hazardous waste disposed	kg	1.85E-02	0.00E+00	8.69E-02	NR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	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.
FUTURA AQUA 20

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

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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

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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

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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

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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.

26. 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 PEF CR – 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

27. 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

28. 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

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 :

FUTURA AQUA is a waterborne coating for interior walls and ceilings indoors surfaces. The coatings are manufactured in one location. It is sold mainly in Europe.

Application method: Varnish brush, mohair roller, painting pad, spray

Pack size:

FUTURA AQUA PRIMER: White: 0.45 l, 0.9 l, 2.7 l, 9 l. Base paint 3: 0.9 l, 2.7 l, 9 l.

FUTURA AQUA 5: Base paints 1 and 3: 0.45 l, 0.9 l, 2.7 l.

FUTURA AQUA 20: Base paints 1 and 3: 0.45 l, 0.9 l, 2.7 l, 9 l. NCS S 0502-Y: 0.45 l, 0.9 l, 2.7 l

FUTURA AQUA 40: Base paints 1 and 3: 0.45 l, 0.9 l, 2.7 l, 9 l. NCS S 0500-N: 0.9 l, 2.7 l. NCS S 0502-Y: 2.7 l

FUTURA AQUA 90: Base paints 1 and 3: 0.45 l, 0.9 l, 2.7 l

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