Environmental Product Declaration

In accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021 for:

KIRJO AQUA

from

TEKNOS GROUP OY

Programme:	The International EPD System, www.environdec.com
Programme operator:	EPD International AB
Type of EPD:	EPD of multiple products, based on worst-case results. The products are listed on page 4
EPD registration number:	EPD-IES-0031176:001
Version date:	2026-04-10
Validity date:	2031-04-10
	An EPD may be updated or depublished if conditions change. To find the latest version of the EPD and to confirm its validity, see www.environdec.com

GENERAL INFORMATION

Programme Information	
Programme:	The International EPD System
Address:	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
Website:	www.environdec.com
E-mail:	support@environdec.com

Product Category Rules (PCR)
CEN standard EN 15804+A2:2019/AC:2021 serves as the Core Product Category Rules (PCR)
Product Category Rules (PCR): International EPD System, in accordance to table 5 in the PCR for Construction Products, 2019:14, version 2.0.1 and the UN CPC code 3511.
PCR review was conducted by: The Technical Committee of the International EPD System. A full list of members is available on www.environdec.com. Review chair: Rob Rouwette (chair), Noa Meron (co-chair) . The review panel may be contacted via support@environdec.com.

Third-party Verification
Independent third-party verification of the declaration and data, according to ISO 14025:2006, via: ☒ **Individual EPD verification without a pre-verified LCA/EPD tool** Third-party verifier: Viktor Hakkarainen, CHM Analytics Approved by: International EPD System
Procedure for follow-up of data during EPD validity involves third party verifier: ☐ Yes ☒ No

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

EPDs within the same product category but published in different EPD programmes, may not be comparable. For two EPDs to be comparable, they shall be based on the same PCR (including the same first-digit version number) or be based on fully aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have identical scope in terms of included life-cycle stages (unless the excluded life-cycle stage is demonstrated to be insignificant); apply identical impact assessment methods (including the same version of characterisation factors); and be valid at the time of comparison.
For further information about comparability, see EN 15804 and ISO 14025.

INFORMATION ABOUT EPD OWNER

Owner of the EPD:

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

LCA practitioner

Kauri Nordström

Tel: +358 457 8203 167

Description of the organisation

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

Product-related or management system-related certifications

Exterior durability of coating systems including KIRJO AQUA documented according to EN 927-2.

PRODUCT INFORMATION

Product name: KIRJO AQUA

Product Series	Product name
KIRJO AQUA	KIRJO AQUA T2504 GRAPHITE GREY
	KIRJO AQUA BASE PAINT 3

UN CPC code: 3511 (Paints and varnishes and related products)

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

Product description:
KIRJO AQUA is a water-borne acrylate-based paint with anticorrosive pigmentation for sheet-iron roofs. Finish: matt.

The paint is suitable for new unpainted zinc coated/galvanized sheet-iron and steel surfaces. KIRJO AQUA can be applied to a new sheet-iron roof as soon as the roof is completed. Suitable also for maintenance painting of sheet-iron roofs which are previously painted with alkyd or acrylate paints. KIRJO AQUA can also be used for maintenance painting of industrially paint coated sheet steel: polyurethane, PURAL, PUREX, polyester, acrylic and PVC-Plastisol coatings.

The manufacturing process for these products contain raw material handling, mixing, quality checking, packaging and cleaning.

Name and location of production site:
Teknos Oy, Perämatkuntie 12, 05200 Rajamäki, Finland
More information: www.teknos.com

Additional technical information
For safety, health, and environmental conditions see the Safety Data Sheet for the declared product at KIRJO AQUA_2025-12-17_EU_en

For products' technical information see the Technical Data sheet:

KIRJO AQUA_0971_TDS_en.pdf

CONTENT DECLARATION.

Content of the product (worst-case)

Product content	Weight [kg]	Post-consumer recycled material, mass-% of product	Biogenic material, mass-% of product	Biogenic material, kg C/product or declared unit
Additives	0-0,05	0	0	0
Fillers	0,20-0,30	0	0	0
Pigments	0-0,10	0	0	0
Solvents	0,50-0,60	0	0	0
Binders	0,20-0,30	0	0	0
Total	1	0	0	0

Mass and the content of packaging

Packaging materials	Mass, kg	Mass-% (versus the product)	Biogenic material, kg C/declared unit
Cardboard	1,09E-03	0,1%	5,46E-04
Polyethylene film	1,24E-03	0,1%	0
Polypropylene	4,87E-02	4,9%	0
Steel tinplated	8,20E-02	8,2%	0
Wooden pallets	6,18E-02	6,2%	3,09E-02
Total	1,95E-01	19%	3,15E-02

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

1 kg biogenic carbon in the product/packaging is equivalent to the uptake of 44/12 kg of CO_2.

Information on the Substances of very high concern

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

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

LCA INFORMATION

Declared unit:

1 kg of sold KIRJO AQUA (including packaging but not auxiliary materials such as brushes or rollers).

The conversion factor to be used for converting the results to represent one liter of paint is: 1,59 l/kg.
The conversion factor to be used for converting the results to represent one m^2 of paint is: 12 m^2/kg.

Time representativeness

Production site data was collected in 2025 and is of reference year 2024. Background data is from Ecoinvent v 3.11 and Sphera LCA Database.

Geographical scope: Europe

Database(s) and LCA software used:

Sphera Solutions' LCA for Experts LCA FE) software version 10.9.1.17 was used together with Sphera Managed LCA Content (MLC) database version 2025, CEPE RM database v4.0 and Ecoinvent v 3.11.

The CEPE database was used as a basis for the paint raw materials. Specific data for the product composition and raw material amounts have been utilized. Representative data from Ecoinvent v 3.11 and Sphera MLC database was used for other processes.

Description of system boundaries:

The LCA is a cradle to gate with modules C1-C4, module D and with optional modules A4-A5.. Major steps from raw material extraction to the end-of-life (final disposal) of the product has been included in the scope of the study. Life cycle stages included are A1-A5, C1-C4 and D. The use stage B is not considered in this study, since no impact are associated with the use stage. The modules C1 and C3 are reported as 0 because there are no dismantling or demolition activities, and no waste processing steps respectively. All impacts associated with the upstream production of materials and energy are included in the system boundaries.

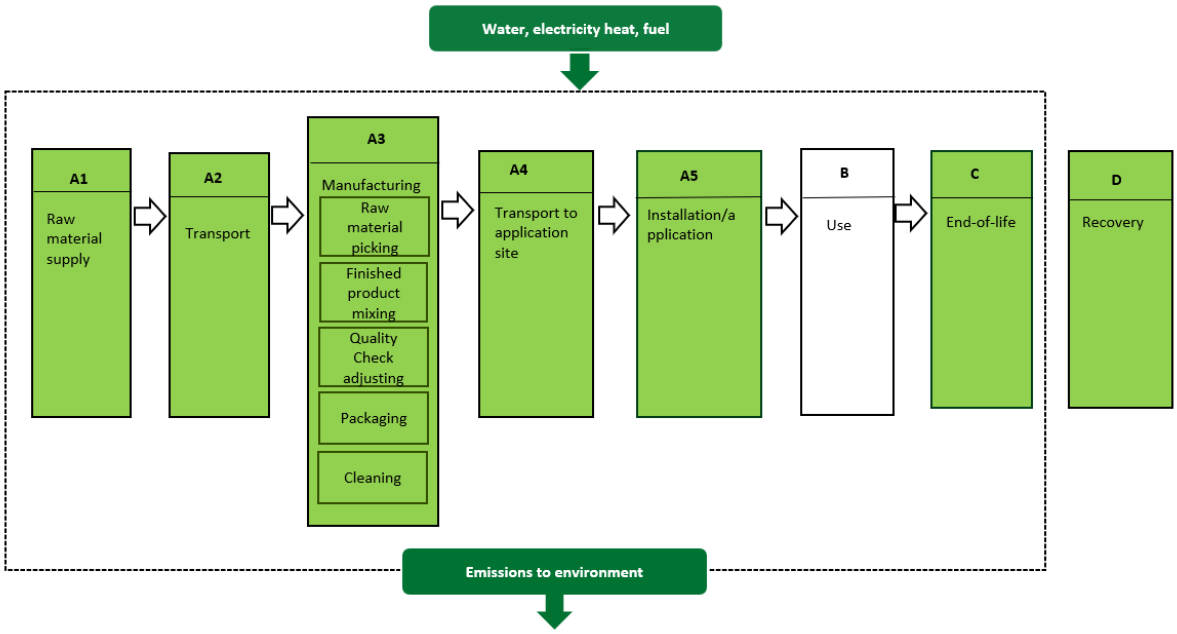
During the use phase, paint products do not consume resources and are not released into the environment. Moreover, painted surfaces do not require maintenance, repair, replacement or

refurbishment beyond their normal use, so no impact is considered for modules B1 to B7 and therefore excluded in this assessment.

Module C considers the end-of-life of the product. Packaging waste is generated during the application of the paint in module A5 therefore, only the impact of the paint is included in module C.

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 recovered from the paint is 0. Energy recovery values for the packaging waste are taken from the background documentation of the respective Ecoinvent datasets.

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



Production process

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

A1. Raw materials supply

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

A2. Transport of raw materials to manufacturer

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

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

A3. Manufacturing

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

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

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

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

Primary production data was obtained for the production site Rajamäki, Finland regarding the inputs. Electricity consumed during the manufacturing process is modelled as Finland Residual mix of different energy source according to GPI 5 rules. All transformation data, transmission network data and energy losses are still as in the original input from Ecoinvent 3.11. Generic data was used for upstream and downstream processes (application, use and waste processing), when no specific data was obtained.

A4. Transport of Regional Distribution Centre and customer

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

Coating transport	**Factory to RDC**	**RDC to PoS**
Type of truck	Lorry, total weight >32t	Lorry, total weight>32t
Distance	350 km	370 km
Capacity	64%	64%
Fuel type and consumption	0,0472 kg diesel per ton*km	0,0472 kg diesel per ton*km
Bulk density of transported products	940 kg/m3	940 kg/m3
Volume capacity utilisation factor	>32 metric ton	>32 metric ton

A5. Application

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

C1. De-construction/demolition

The coating is not separated from the substrate during demolition. Consequently, the environmental impact of the paint during the demolition phase is considered negligible and modelled as having zero impact.

C2. Transport of waste material

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

End-of-life transport	**PoS to waste processing**
Type of truck	Lorry, total weight >32 t, EURO 6
Distance	80 km
Capacity	64%

C3. Waste processing

Life cycle stage C3 is reported as 0 as there is no waste processing involved and all of the waste is sent for landfilling.

C4. Disposal

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

D. Benefits and loads beyond the system boundaries

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

Allocation

The allocation is made in accordance with EN15804:A2:2019/AC:2021. Incoming energy, water and waste production in-house is allocated equally among all products based on economic value.

Cut-off criteria

Cut-offs according to the PCR include the auxiliary materials such as brushes and rollers that are used for product application. These are estimated to contribute less than 1% of the impacts and are therefore not included. Cut-offs in the background processes are according to the respective methodologies (See documentation of the relevant processes at CEPE processes (Wernet, Bauer, & Steubing, 2016) and EcoInvent processes (Dahlgren , Stripple, Oliveira, & Rydberg , 2016).

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

Modules declared, geographical scope, share of primary data (in GWP-GHG results) and data variation (in GWP-GHG results):

	Product stage			Distribution/installation stage		Use stage	End-of-life stage				Beyond product life cycle
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use, maintenance, repair, replacement, refurbishment, operational energy and operational water use	De-constuction, demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
Module	**A1**	**A2**	**A3**	**A4**	**A5**	**B1-B7**	**C1**	**C2**	**C3**	**C4**	**D**
Modules declared	X	X	X	X	X	ND	X	X	X	X	X
Geography	EU	EU	FI	EU	EU	ND	EU	EU	EU	EU	EU
Share of primary data	15% Note 1			-	-	-	-	-	-	-	-
Variation – products	5%			-	-	-	-	-	-	-	-
Variation-sites	0%			-	-	-	-	-	-	-	-

Note 1: Based on GWP-GHG of the energy consumption in module A3 divided by GWP-GHG for stages A1-A3.

Data Quality Information

Generic data was used for upstream and downstream processes (application, use and waste processing), when no specific data was obtained.

Electricity mix

Electricity mix consumed within the manufacturing plant was modelled based on the residual mix in Finland from the Ecoinvent dataset. The emission factor for "FI: Electricity medium voltage, residual mix" for the GWP-GHG is 0,66 kg CO2e/kWh (based on EF3.1).

Data quality assessment

Process	Source type	Source	Reference year	Data category	Share of primary data, of GWP-GHG results for A1-A3
Raw materials	Database	CEPE RM Database V4, Ecoinvent v3.11	2024	Secondary data	0 %
Generation of electricity used in manufacturing of product	Database	Ecoinvent v3.11	2023	Primary data	11 %
Other energy used in manufacturing of product	Database	Ecoinvent v3.11	2021	Primary data	4 %
Transport	Database	Ecoinvent v 3.11	2023	Proxy data	0 %
Production of packaging	Database	Ecoinvent v 3.11	2023	Proxy data	0 %
Hazardous paint waste	Database	Ecoinvent 3.11	2023	Secondary data	0 %
Non-hazardous waste	Database	Sphera LCA Database	2023	Secondary data	0 %
Other processes	Databases	Ecoinvent v3.11, Gabi 2025	2019–2023	Secondary data	0 %
Total share of primary data, of GWP-GHG results for A1-A3					15 %

*The share of primary data is calculated based on GWP-GHG results. It is a simplified indicator for data quality that supports the use of more primary data, to increase the representativeness of and comparability between EPDs. Note that the indicator does not capture all relevant aspects of data quality and is not comparable across product categories.

Data Quality Information

Primary data was collected directly from the relevant manufacturing plant and covers the period from January 1, 2024 to December 31, 2024. All upstream and downstream processes, with the exception of energy consumption during manufacturing are based on secondary and proxy data from Ecoinvent 3.11 and CEPE RM Database v4, Sphera LCA for experts.

Electricity mix consumed within the manufacturing plant was modelled using the residual mix in Finland from the Ecoinvent dataset. The emission factor for FI: Electricity medium voltage, residual mix in terms of GWP-GHG is 0,71 kg CO2e/kWh (based on EF3.1).

Since acrylate binder has a notable impact on the core environmental impact categories, it has been assessed separately in the table.

The data quality levels of the datasets are classified as Very good, Good and Fair in terms of geographical representativeness, technical representativeness and time representativeness in accordance with Annex E, Table E.1 - Data quality level and criteria of the UN Environment Global Guidance on LCA database development, as outlined in EN15804:2012+A2:2019/AC:2021. These levels reflect the degree of confidence in the data and its suitability for calculating the environmental impact associated with the product. Specifically, the classification assess how well the data corresponds to the real-world conditions across different geographical regions, technologies and time period.

Summary of the data quality assessment

Datasets	Geographical representativeness	Technical representativeness	Time Representativeness
Production of raw materials	Good	Fair	Good
Acrylate binder	Good	Fair	Good
Electricity used in manufacturing of product	Very good	Good	Good
Other energy used in manufacturing of product	Very good	Good	Good
Transportation	Good	Good	Good
Packaging	Good	Good	Good
End of life of paint	Good	Good	Good

Detailed explanation of the assessment is provided in the project report.

ENVIRONMENTAL PERFORMANCE

LCA results of the product(s) - main environmental performance results

Notes on other indicators

The estimated impact results are only relative statements, which do not indicate the endpoints of the impact categories, exceeding threshold values, safety margins and/or risks.

The use of primary energy is separated into energy used as raw material and energy used as energy carrier as per option B in Annex 3 in the PCR (EPD International, 2025).

The results of the end-of-life stage (module C) should be considered when using the results of the production stage (A1-A3).

Disclaimers

The following apply to the indicators, as identified, in the result tables.

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

1. This indicator is identical to GWP-total except that the CF for biogenic CO2 is set to zero. It has been included in the EPD following the PCR.

2. This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.

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

Mandatory impact category indicators according to EN 15804

Results per declared unit									
Indicators	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-total	kg CO2 eq.	2,11E+00	1,03E-01	1,64E-01	0,00E+00	3,46E-03	0,00E+00	8,98E-02	-3,39E-02
GWP-fossil	kg CO2 eq.	2,30E+00	9,52E-02	6,33E-02	0,00E+00	3,46E-03	0,00E+00	2,63E-03	-3,35E-02
GWP- biogenic	kg CO2 eq.	-1,88E-01	7,33E-03	1,01E-01	0,00E+00	2,13E-06	0,00E+00	8,72E-02	-3,89E-04
GWP- luluc	kg CO2 eq.	3,09E-03	3,28E-05	3,12E-06	0,00E+00	1,25E-06	0,00E+00	1,49E-06	-4,29E-05
ODP	kg CFC-11 eq.	6,39E-07	1,98E-09	1,03E-10	0,00E+00	7,60E-11	0,00E+00	7,32E-11	-3,54E-10
AP	mol H+ eq.	8,49E-03	3,70E-04	3,09E-05	0,00E+00	1,41E-05	0,00E+00	1,84E-05	-2,22E-04
EP-freshwater	kg P eq.	5,95E-04	6,85E-06	1,33E-06	0,00E+00	2,46E-07	0,00E+00	2,30E-07	-2,02E-05
EP-marine	kg N eq.	1,60E-03	1,40E-04	3,00E-05	0,00E+00	5,31E-06	0,00E+00	7,09E-06	-3,19E-05
EP- terrestrial	mol N eq.	1,61E-02	1,51E-03	1,35E-04	0,00E+00	5,75E-05	0,00E+00	7,72E-05	-3,16E-04
POCP	kg NMVOC eq.	8,17E-03	5,70E-04	4,51E-05	0,00E+00	2,18E-05	0,00E+00	2,79E-05	-9,89E-05
ADP-mineral and metals*[3]	kg Sb eq.	2,99E-05	2,55E-07	1,11E-08	0,00E+00	9,78E-09	0,00E+00	3,85E-09	-1,66E-08
ADP- fossil*	MJ	4,46E+01	1,33E+00	8,38E-02	0,00E+00	5,11E-02	0,00E+00	6,43E-02	-5,85E-01
WDP*	m³	7,88E+00	8,40E-03	0,00E+00	0,00E+00	3,05E-04	0,00E+00	2,87E-03	-9,12E-03
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption								

Additional mandatory and voluntary impact category indicators

Results per declared unit									
Indicators	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-GHG[1]	kg CO_2 eq.	2,30E+00	9,52E-02	6,33E-02	0,00E+00	3,46E-03	0,00E+00	2,63E-03	-3,36E-02

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

Results per declared unit									
Indicators	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
PM	Disease incidences	8,33E-08	7,24E-09	5,72E-10	0,00E+00	2,77E-10	0,00E+00	4,12E-10	-1,73E-09
IRP[2]	kBq U235 eq.	2,01E-01	1,49E-03	7,46E-05	0,00E+00	5,70E-05	0,00E+00	3,86E-05	-8,94E-03
ETP-fw*	CTUe	2,34E+01	1,72E-01	4,03E-02	0,00E+00	5,91E-03	0,00E+00	4,58E-03	-5,65E-02
HTP-c*[3]	CTUh	1,41E-09	1,81E-11	3,96E-12	0,00E+00	6,06E-13	0,00E+00	5,09E-13	-5,98E-12
HTP-nc*[3]	CTUh	6,10E-08	7,82E-10	1,68E-10	0,00E+00	2,78E-11	0,00E+00	1,06E-11	-2,12E-10
SQP*[3]	Pt	1,55E+01	1,33E+00	1,20E-01	0,00E+00	5,12E-02	0,00E+00	1,26E-01	-1,75E-01
Acronyms:		PM = Particulate matter, IRP= Ionizing radiation, human health , ETP-fw= Eco-toxicity-freshwater, HTP-c= Human toxicity, cancer effect ; HTP-nc= Human toxicity, non-cancer effects , SQP = Land use related impacts/soil quality							

Reading example : 9,0E-03= 9,0*10-3=0,009

Resource use indicators

Results per declared unit									
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	MJ	3,50E+00	2,06E-02	1,26E-03	0,00E+00	7,88E-04	0,00E+00	6,08E-04	-9,72E-02
PERM	MJ	1,34E+00	0,00E+00	-2,99E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	4,83E+00	2,06E-02	-2,98E-01	0,00E+00	7,88E-04	0,00E+00	6,08E-04	-9,72E-02
PENRE	MJ	4,46E+01	1,33E+00	8,38E-02	0,00E+00	5,11E-02	0,00E+00	6,43E-02	-5,85E-01
PENRM	MJ	7,39E+00	0,00E+00	-7,05E-01	0,00E+00	0,00E+00	0,00E+00	-8,90E-01	0,00E+00
PENRT	MJ	5,20E+01	1,33E+00	-6,21E-01	0,00E+00	5,11E-02	0,00E+00	-8,27E-01	-5,85E-01
SM	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	m^3	2,69E-01	1,96E-04	-1,71E-04	0,00E+00	7,09E-06	0,00E+00	6,68E-05	-2,12E-04
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water								

Reading example : 9,0E-03= 9,0*10-3=0,009

Waste indicators

Results per declared unit									
Parameters	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
Hazardous waste disposed	kg	7,10E-02	1,77E-03	6,78E-04	0,00E+00	5,26E-05	0,00E+00	5,16E-05	-7,23E-04
Non-hazardous waste disposed	kg	2,17E+00	2,53E-02	2,73E-01	0,00E+00	4,90E-04	0,00E+00	6,98E-04	-2,71E-03
Radioactive waste disposed	kg	1,96E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Reading example : 9,0E-03= 9,0*10-3=0,009

Output flow indicators

Results per declared unit									
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
Components for re-use	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	MJ	0,00E+00	0,00E+00	1,45E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	2,84E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Reading example : 9,0E-03= 9,0*10-3=0,009

Variation of results (>10%) for KIRJO AQUA

Environmental Impact Indicators	Unit	Variation
Acidification	Mole of H+ eq.	11 %
Water use	m^3 world equiv.	86 %
Use of net fresh water	m^3	90 %
Particulate matter	Disease incidences	12 %

ABBREVIATIONS

All abbreviations used in the EPD can be found below.

Abbreviation	Definition
CEN	European Committee for Standardization
CEPE	European Council of the Paint, Printing Ink and Artists‘ Colours Industry
CPC	Central product classification
DU	Declared Unit
EF	Environmental Footprint
EN	European Norm (Standard)
EPD	Environmental Product Declaration
GPI	General Programme Instructions
ISO	International Organization for Standardization
kWh	kilo Watt hour
LCA	Life Cycle Assessment
NACE	Nomenclature of Economic Activities
ND	Not Declared
PEFCR	Product Environmental Footprint Category Rules
PoS	Point of Sales
RDC	Regional Distribution Centre
SVHC	Substances of Very High Concern
VOC	Volatile Organic Compound

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VERSION HISTORY

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