



ENVIRONMENTAL PRODUCT DECLARATION

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

Quartz

Kährs Group



EPD HUB, HUB-3346 Publishing date 25 May 2025, last updated on 25 May 2025, valid until 25 May 2030.

Life Cycle Assessment study has been performed in accordance with the requirements of EN 15804, EPD Hub PCR version 1.1 (5 Dec 2023) and JRC characterization factors EF 3.1.



Created with One Click LCA







GENERAL INFORMATION

MANUFACTURER

Manufacturer	Kährs Group
Address	Ångbåtsbron 1 SE-201 21 Malmö, Sweden
Contact details	info@kahrs.com
Website	www.kahrs.com

EPD STANDARDS, SCOPE AND VERIFICATION

Program operator	EPD Hub, hub@epdhub.com
Reference standard	EN 15804+A2:2019 and ISO 14025
PCR	EPD Hub Core PCR Version 1.1, 5 Dec 2023 EN 16810 Product category rules for resilient, textile and laminate floor coverings
Sector	Construction product
Category of EPD	Third party verified EPD
Parent EPD number	-
Scope of the EPD	Cradle to gate with options, A4-A5, and modules C1-C4, D
EPD author	Tomi Tehomaa, Kährs
EPD verification	Independent verification of this EPD and data, according to ISO 14025: □ Internal verification ☑ External verification
EPD verifier	Magaly González Vázquez, as an authorized verifier acting for EPD Hub Limited

This EPD is intended for business-to-business and/or business-to-consumer communication. The manufacturer has the sole ownership, liability, and responsibility for the EPD. EPDs within the same product category but from different

programs may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804 and if they are not compared in a building context.

PRODUCT

Product name VP-007	Quartz
Additional labels	-
Product reference	108000 - 108999, 10248000 -
	10248999, 10618000 - 10618999
Place(s) of raw material origin	-
Place of production VP-008	Kährs Finland Oy, Ikaalinen,
	Finland
Place(s) of installation and use	-
Period for data VP-013	1.1.2024 - 31.12.2024
Averaging in EPD VP-024-C	No averaging
Variation in GWP-fossil for A1-A3 (%)	-
GTIN (Global Trade Item Number)	-
NOBB (Norwegian Building Product Database)	-

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 m2 of the floor covering
Declared unit mass	3,9 kg
GWP-fossil, A1-A3 (kgCO ₂ e)	3,80E+00
GWP-total, A1-A3 (kgCO ₂ e)	3,24E+00
Secondary material, inputs (%)	0,22
Secondary material, outputs (%)	0
Total energy use, A1-A3 (kWh)	28,5
Net freshwater use, A1-A3 (m ³)	0,24





PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Kährs Group is a world-leading flooring manufacturer in hardwood and resilient flooring with a number of strong brands in its product portfolio. The company is dedicated to providing the market with innovative new flooring solution. Kährs Group, which delivers products to more than 70 countries, is the market leader in Sweden and Finland and holds a strong position in other key markets, such as Norway, the UK, US, Germany, and Switzerland.

PRODUCT DESCRIPTION

This applies to Kährs Quartz product range manufactured by Kährs. Products are based upon quartz vinyl tile according to /EN 17396/ and are supplied in tile form. Quartz product family is consisting of following designs: Quartz Uni, Quartz Tema, Quartz Mosaic, Quartz Lines. Three tile sizes: 12 Inch x 12 Inch, 12 Inch x 24 Inch and 24 Inch x 24 Inch.

For the placing on the market of the product in the European Union/European Free Trade Association (EU/EFTA) (with the exception of Switzerland)/Regulation (EU) No. 305/2011 (CPR)/ applies. The product needs a declaration of performance taking into consideration /EN 14041:2004/: Resilient, textile, laminate and modular multilayer floor coverings -Essential characteristics/ and the CE-marking. For application and use the respective national provisions apply. This EPD follows the rules according standard EN 16810 Product category rules for resilient, textile and laminate floor coverings.

Further information can be found at www.kahrs.com.

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	0	-
Minerals	70	Finland, Belgium
Fossil materials	24	Netherlands, Germany
Bio-based materials	6	Denmark

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	0,095
Biogenic carbon content in packaging, kg C	0,140

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 m2 of the floor covering
Mass per declared unit	3,9 kg
Functional unit	-
Reference service life	-

SUBSTANCES, REACH - VERY HIGH CONCERN

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



PRODUCT LIFE-CYCLE

SYSTEM BOUNDARY

This EPD covers the life-cycle modules listed in the following table.

Product stage Assembly stage				Use stage								nd of li	ife stag	Beyond the system boundaries						
A1	A2	A3	A4	A5	B1	B2	В3	B4	B5	B6	B7	C1	C2	СЗ	C 4		D			
×	×	×	×	×	MND	MND	MND	MND	MND	MND	MND	×	×	×	×		×			
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction/ demolition	Transport	Waste processing	Disposal	Reuse	Recovery	Recycling		

Modules not declared = MND. Modules not relevant = MNR

MANUFACTURING AND PACKAGING (A1-A3)

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

The product considered in this EPD is made in the Kährs manufacturing plant in Ikaalinen, Finland. Data is collected at 12 months period from 1/1/2024 - 31/12/2024.

Raw materials are transported from suppliers. At first step of production raw materials are mixed, milled and calandered to sheets.

Sheets are pressed and annealed. After punching right size tiles surface treatment has been applied.

Production losses of materials are included in the calculation. Green energy is used at manufacturing and it consists of wind power based electricity and bio gas based heat energy. Material residues are sent to incineration as special waste. Transportation distance is 150 km.

Finally products are packed in cardboard boxes on wooden pallets.

The use of green energy in manufacturing is demonstrated through contractual instruments (GOs, RECs, etc.), and its use is ensured throughout the validity period of this EPD.

TRANSPORT AND INSTALLATION (A4-A5)

Transportation impacts occurred from final products delivery to construction site (A4) cover fuel direct exhaust emissions, environmental impacts of fuel production, as well as related infrastructure emissions.

Quartz tiles are made in Finland, where they are transported into different markets. The estimated average distribution distance between the factory and the installation site is 500 km. This is presenting typical average delivery distance at north Europe. The distribution is made by truck.

Product is installed manually by using water based acrylic dispersion adhesive about 250 g/m2. Material lost during installation is 3%. This installation waste is handled mainly by landfill. Transporting distance to landfill is 100 km.



EoL of packaging materials follows European scenario based to statistic data. Cardboard 83% is recycled, 8 % incinerated and 9% landfilled. Wood 52% recycled, 30% incinerated and 38% landfilled. Plastics 40% recycled, 37% incinerated and 23% landfilled. Transportation distance for packaging is 50 km.

PRODUCT USE AND MAINTENANCE (B1-B7)

This EPD does not cover the use phase.

Air, soil, and water impacts during the use phase have not been studied.

PRODUCT END OF LIFE (C1-C4, D)

Module C1: Flooring is manually removed and no energy is used in the process.

Module C2: Transportation distance to waste treatment is estimated to be 100 km.

Module C3: No flows for recycling or reuse.

Module C4: Flooring material is mainly landfilled at the moment so it was assumed 100% landfilled

Module D: Benefits of packaging materials are covered.

MANUFACTURING PROCESS





LIFE-CYCLE ASSESSMENT

CUT-OFF CRITERIA

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

VALIDATION OF DATA

Data collection for production, transport, and packaging was conducted using time and site-specific information, as defined in the general information section on page 1 and 2. Upstream process calculations rely on generic data as defined in the Bibliography section. Manufacturer-provided specific and generic data were used for the product's manufacturing stage. The analysis was performed in One Click LCA EPD Generator, with the 'Cut-Off, EN 15804+A2' allocation method, and characterization factors according to EN 15804:2012+A2:2019/AC2021 and JRC EF 3.1.

ALLOCATION, ESTIMATES AND ASSUMPTIONS

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

Data type	Allocation
Raw materials	No allocation
Packaging material	No allocation
Ancillary materials	Not applicable
Manufacturing energy and waste	Allocated by mass or volume

AVERAGES AND VARIABILITY

Type of average	No averaging
Averaging method	Not applicable
Variation in GWP-fossil for A1-A3 (%)	-

This EPD is product and factory specific and does not contain average calculations.

LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator. The LCA and EPD have been prepared according to the reference standards and ISO 14040/14044. The EPD Generator uses Ecoinvent v3.10.1 and One Click LCA databases as sources of environmental data. Allocation used in Ecoinvent 3.10.1 environmental data sources follow the methodology 'allocation, Cutoff, EN 15804+A2'.





ENVIRONMENTAL IMPACT DATA

CORE ENVIRONMENTAL IMPACT INDICATORS - EN 15804+A2, PEF

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	СЗ	C4	D
GWP – total ¹⁾	kg CO₂e	2,96E+00	3,94E-01	-1,13E-01	3,24E+00	2,25E-01	1,35E+00	MND	0,00E+00	4,47E-02	0,00E+00	3,66E+00	-1,63E-01						
GWP – fossil	kg CO2e	3,06E+00	3,93E-01	3,50E-01	3,80E+00	2,25E-01	6,52E-01	MND	0,00E+00	4,47E-02	0,00E+00	3,32E+00	-1,91E-01						
GWP – biogenic	kg CO₂e	-3,68E-01	6,92E-05	-4,67E-01	-8,35E-01	4,74E-05	6,89E-01	MND	0,00E+00	1,01E-05	0,00E+00	3,43E-01	2,86E-02						
GWP – LULUC	kg CO2e	2,71E-01	1,72E-04	3,59E-03	2,75E-01	8,45E-05	8,38E-03	MND	0,00E+00	2,00E-05	0,00E+00	4,12E-04	-1,84E-04						
Ozone depletion pot.	kg CFC-11e	4,79E-08	6,49E-09	4,51E-09	5,89E-08	4,53E-09	2,47E-09	MND	0,00E+00	6,59E-10	0,00E+00	1,56E-08	-6,01E-09						
Acidification potential	mol H⁺e	1,84E-02	2,34E-03	2,31E-03	2,30E-02	7,26E-04	2,09E-03	MND	0,00E+00	1,52E-04	0,00E+00	2,64E-03	-8,56E-04						
EP-freshwater ²⁾	kg Pe	9,03E-03	2,73E-05	1,47E-04	9,21E-03	1,52E-05	2,88E-04	MND	0,00E+00	3,48E-06	0,00E+00	1,46E-04	-6,96E-05						
EP-marine	kg Ne	7,23E-03	6,65E-04	5,04E-04	8,40E-03	2,47E-04	6,37E-04	MND	0,00E+00	5,00E-05	0,00E+00	1,26E-03	-1,40E-04						
EP-terrestrial	mol Ne	3,70E-02	7,30E-03	5,04E-03	4,93E-02	2,68E-03	5,27E-03	MND	0,00E+00	5,45E-04	0,00E+00	7,77E-03	-1,44E-03						
POCP ("smog") ³)	kg NMVOCe	6,61E-03	2,61E-03	1,76E-03	1,10E-02	1,18E-03	1,50E-03	MND	0,00E+00	2,24E-04	0,00E+00	2,69E-03	-8,52E-04						
ADP-minerals & metals⁴)	kg Sbe	1,08E-05	1,06E-06	4,55E-06	1,64E-05	6,21E-07	7,99E-07	MND	0,00E+00	1,25E-07	0,00E+00	3,81E-06	-9,85E-07						
ADP-fossil resources	MJ	3,05E+01	5,57E+00	4,35E+00	4,04E+01	3,26E+00	1,00E+01	MND	0,00E+00	6,48E-01	0,00E+00	5,89E+00	-4,81E+00						
Water use ⁵⁾	m³e depr.	1,37E+00	2,66E-02	1,22E-01	1,52E+00	1,67E-02	1,80E-01	MND	0,00E+00	3,20E-03	0,00E+00	3,87E+00	-5,36E-02						

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





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

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Particulate matter	Incidence	3,14E-07	3,44E-08	2,93E-08	3,78E-07	2,24E-08	3,11E-08	MND	0,00E+00	4,47E-09	0,00E+00	5,91E-08	-6,83E-09						
Ionizing radiation ⁶⁾	kBq U235e	5,09E-02	5,43E-03	2,09E-02	7,72E-02	3,93E-03	3,44E-03	MND	0,00E+00	5,65E-04	0,00E+00	2,04E-02	-3,26E-02						
Ecotoxicity (freshwater)	CTUe	2,68E+01	7,27E-01	2,11E+00	2,96E+01	3,84E-01	1,72E+00	MND	0,00E+00	9,17E-02	0,00E+00	2,32E+02	-3,99E-01						
Human toxicity, cancer	CTUh	4,54E-09	6,76E-11	3,55E-10	4,97E-09	3,70E-11	5,42E-09	MND	0,00E+00	7,37E-12	0,00E+00	6,13E-08	-3,78E-11						
Human tox. non-cancer	CTUh	3,60E-08	3,37E-09	5,93E-09	4,53E-08	2,12E-09	2,51E-09	MND	0,00E+00	4,20E-10	0,00E+00	1,87E-08	-1,52E-09						
SQP ⁷⁾	-	3,51E+01	4,63E+00	2,07E+01	6,05E+01	3,28E+00	2,38E+00	MND	0,00E+00	6,53E-01	0,00E+00	3,92E+00	-7,68E-01						

6) EN 15804+A2 disclaimer for lonizing radiation, human health. This impact category deals mainly with the eventual impact of low-dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator; 7) SQP = Land use related impacts/soil quality.

USE OF NATURAL RESOURCES

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Renew. PER as energy ⁸⁾	MJ	1,13E+01	8,02E-02	2,75E+01	3,89E+01	5,31E-02	-2,11E+00	MND	0,00E+00	8,88E-03	0,00E+00	4,87E-01	3,49E-01						
Renew. PER as material	MJ	2,80E+00	0,00E+00	2,86E+00	5,65E+00	0,00E+00	-2,86E+00	MND	0,00E+00	0,00E+00	0,00E+00	-2,79E+00	1,91E-01						
Total use of renew. PER	MJ	1,41E+01	8,02E-02	3,04E+01	4,46E+01	5,31E-02	-4,97E+00	MND	0,00E+00	8,88E-03	0,00E+00	-2,30E+00	5,40E-01						
Non-re. PER as energy	MJ	5,38E+01	5,57E+00	4,22E+00	6,36E+01	3,26E+00	1,34E+00	MND	0,00E+00	6,48E-01	0,00E+00	-5,78E+01	-4,81E+00						
Non-re. PER as material	MJ	2,23E+01	0,00E+00	-1,06E+00	2,12E+01	0,00E+00	3,67E+00	MND	0,00E+00	0,00E+00	0,00E+00	-2,49E+01	2,06E+00						
Total use of non-re. PER	MJ	7,61E+01	5,57E+00	3,16E+00	8,49E+01	3,26E+00	5,01E+00	MND	0,00E+00	6,48E-01	0,00E+00	-8,27E+01	-2,74E+00						
Secondary materials	kg	8,71E-03	2,46E-03	9,05E-02	1,02E-01	1,41E-03	3,49E-03	MND	0,00E+00	2,76E-04	0,00E+00	2,12E-03	4,90E-02						
Renew. secondary fuels	MJ	1,51E-04	2,80E-05	5,96E-02	5,97E-02	1,78E-05	1,80E-03	MND	0,00E+00	3,50E-06	0,00E+00	4,92E-04	3,57E-06						
Non-ren. secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00						
Use of net fresh water	m ³	2,32E-01	7,69E-04	2,95E-03	2,36E-01	4,81E-04	9,99E-03	MND	0,00E+00	9,58E-05	0,00E+00	8,74E-02	-1,75E-03						

8) PER = Primary energy resources.





END OF LIFE – WASTE

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	С3	C4	D
Hazardous waste	kg	1,77E-01	8,80E-03	4,70E-02	2,33E-01	4,72E-03	1,26E-02	MND	0,00E+00	1,10E-03	0,00E+00	9,06E-01	-9,92E-03						
Non-hazardous waste	kg	5,15E+00	1,66E-01	7,95E-01	6,11E+00	9,44E-02	9,74E-01	MND	0,00E+00	2,03E-02	0,00E+00	7,86E+00	-1,24E+00						
Radioactive waste	kg	2,07E-05	1,34E-06	5,28E-06	2,74E-05	9,72E-07	1,65E-04	MND	0,00E+00	1,38E-07	0,00E+00	5,21E-06	-8,34E-06						
END OF LIFE – OUTPUT FLOWS																			
Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	В3	B4	B5	B6	B7	C1	C2	СЗ	C4	D
Components for re-use	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00						
Materials for recycling	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,80E-01	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00						
Materials for energy rec	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00						
Exported energy	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,09E+00	MND	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	0,00E+00	0,00E+00	0,00E+00	4,62E-01	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00						
Exported energy – Heat	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,27E-01	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00						



SCENARIO DOCUMENTATION

Manufacturing energy scenario documentation

Scenario parameter	Value
Electricity data source and quality	Electricity production, wind, 1-3MW turbine, onshore (Reference product: electricity, high voltage)
Electricity CO2e / kWh	0,0174
District heating data source and quality	Heat and power co-generation, biogas, gas engine (Reference product: heat, central or small-scale, other than natural gas)
District heating CO2e / kWh	0,0015

Transport scenario documentation A4

Scenario parameter	Value
Specific transport CO2e emissions, kg CO2e / tkm	0,11
Average transport distance, km	500
Capacity utilization (including empty return) %	100
Bulk density of transported products	1000
Volume capacity utilization factor	<1

Installation scenario documentation A5

Scenario information	Value
Ancillary materials for installation (specified by material) / kg or other units as appropriate	0,25
Water use / m ³	0
Other resource use / kg	0
Quantitative description of energy type (regional mix) and consumption during the installation process / kWh or MJ	0
Waste materials on the building site before waste processing, generated by the product's installation (specified by type) / kg	0,415
Output materials (specified by type) as result of waste processing at the building site e.g. collection for recycling, for energy recovery, disposal (specified by route) / kg	0,415
Direct emissions to ambient air, soil and water / kg	0







End of life scenario documentation

Scenario information	Value
Collection process – kg collected separately	0
Collection process – kg collected with mixed waste	4,15
Recovery process – kg for re-use	0
Recovery process – kg for recycling	0
Recovery process – kg for energy recovery	0
Disposal (total) – kg for final deposition	4,15
Scenario assumptions e.g. transportation	100 km





VERIFICATION STATEMENT

VERIFICATION PROCESS FOR THIS EPD

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

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

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

THIRD-PARTY VERIFICATION STATEMENT

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

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

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

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

Magaly González Vázquez, as an authorized verifier acting for EPD Hub Limited 25.05.2025



VERIFIED ISO 14025



Kährs