

ENVIRONMENTAL PRODUCT DECLARATION

In accordance with EN 15804+A2:2019 and ISO 14025:2010

Product name:
Solid and Industrial Parquet Flooring



Producer:
AST-CJ Sp. z o.o.
Address:
ul. Parkowa 1,
64-234 Barchlin, Poland



Issued on 25 September 2025
Valid until 25 September 2030

GENERAL INFORMATION

EPD OWNER

Manufacturer / EPD Holder	AST-CJ Sp. z o.o.
Address	ul. Parkowa 1, 64-234 Barchlin, Poland
Contact details	Aleksandra Kubacka, biuro@ast-cj.pl
Website	https://ast-cj.pl/

PRODUCT IDENTIFICATION

Product name	Solid and Industrial Parquet Flooring
Place(s) of production	Barchlin, Poland

EPD INFORMATION

EPD Polska program operator	Multicert Sp. z o.o. Ul. Mydlarska 47, 04-690 Warszawa, Poland www.epd.org.pl , epd@epd.org.pl
EPD standards	This EPD is in accordance with EN 15804+A2 and ISO 14025 standards.
Product category rules	The CEN standard EN 15804+A2 serves as the core PCR.
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal certification ☒ External verification
EPD verifier	Daniel Wałach, Ph.D.
EPD number	EPD-P 04.09.2025
Registration:	EPD Polska www.epd.org.pl
Publishing date	25 September 2025
EPD valid until	25 September 2030
Reasons for performing LCA	B2B
Accountability	The EPD Holder is responsible for the information provided and evidence. Multicert Sp. z o.o. does not hold responsibility for the manufacturer information, life cycle assessment data nor supporting evidence.

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.

COMPANY INFORMATION

HOLDER OF THE EPD

AST-CJ Sp. z o.o.
ul. Parkowa 1,
64-234 Barchlin, Poland

COMPANY PROFILE

AST-CJ is a Polish manufacturer specializing in the production of high-quality solid wood flooring. With over 30 years of experience, the company combines traditional craftsmanship with modern technology, ensuring precise processing and long-lasting durability of its products.

The company's product portfolio includes solid parquet and industrial parquet, available in various dimensions and finishes (unfinished, oiled, or lacquered). All products are manufactured exclusively from carefully selected European hardwoods, primarily oak, sourced from sustainably managed forests.

AST-CJ's production facilities are equipped with drying kilns, precision machining lines, advanced sorting line and finishing technologies that guarantee consistent quality and compliance with European standards. The company places strong emphasis on strict quality control at every stage of production, from raw material selection to final packaging.

Sustainability is an integral part of AST-CJ's philosophy. The company optimizes the use of raw materials, minimizes production waste, and applies environmentally friendly finishing systems. By producing long-lasting, natural wood flooring, AST-CJ contributes to healthy indoor environments and the long-term storage of biogenic carbon.

AST-CJ products carry the CE mark in accordance with EN 14342, confirming compliance with the European Construction Products Regulation (CPR). Thanks to their quality and durability, AST-CJ parquet floors are successfully used in residential, commercial, and public projects across Poland and international markets.

PRODUCT INFORMATION

PRODUCT DESCRIPTION

The product range of AST-CJ includes two main categories of wood flooring: industrial parquet and solid parquet.

Industrial parquet (10 mm and 15 mm, unfinished / oiled / lacquered)

Industrial parquet consists of narrow solid wood lamellas, mainly oak or ash, set on edge and arranged in a block structure pressed in sheets of 163/245x490 mm finished with tongue-and-groove on all 4 sides. The construction of single lamellas (horizontal or vertical orientation depending on article) provides high dimensional stability, excellent wear resistance, and superior load-bearing capacity. The product is available in three variants: unfinished (to be finished on site), factory-oiled, or factory-lacquered, offering fast and clean installation and flexibility depending on the requirements of the project. The flooring can be renovated (sanded and refinished). Product is suitable for underfloor heating.

Solid parquet (16 mm and 22 mm, unfinished / oiled / lacquered)

Solid parquet is a single-layer product made entirely of hardwood, typically oak, with machined tongue-and-groove joints. It is manufactured in thicknesses of 16 mm and 22 mm and is available as unfinished, oiled, or lacquered. Thanks to its thickness, the flooring can be renovated multiple times (sanded and refinished), thus significantly extending its useful life.

All AST-CJ parquet products are produced from dried hardwood with a typical moisture content of 7–11%. The natural material composition ensures a healthy indoor climate and contributes to carbon storage over the product lifetime. Surface coatings (natural oils or UV-cured lacquers) are applied using certified finishing systems. The products do not contain hazardous substances listed in the REACH Candidate List (SVHC) above 0.1% by mass.

This EPD covers Solid and Industrial Parquet Flooring and includes the following product groups:

Id.	Name	Mass per declared unit [kg/m ²]
1	F-AST Industrial parquet 10 mm, unfinished / oiled / lacquered	7.50
2	F-AST Industrial parquet 15 mm, unfinished / oiled / lacquered	10.01
3	Solid parquet 16 mm, unfinished / oiled / lacquered	10.29
4	Solid parquet 22 mm, unfinished / oiled / lacquered	14.00

PRODUCT APPLICATION

AST-CJ parquet flooring products are designed for indoor applications in both residential and commercial buildings.

F-AST Industrial parquet is particularly well-suited for areas exposed to high loads and intensive traffic such as offices, schools, public buildings, and commercial interiors. Its construction makes it exceptionally resistant to abrasion and mechanical damage, while maintaining a distinctive aesthetic value.

Solid parquet provides a more traditional flooring solution, offering natural elegance and long service life for living rooms, bedrooms, corridors, and representative interiors. Depending on the chosen finish (oil or lacquer), it can achieve different aesthetic and functional characteristics, such as increased surface hardness or enhanced resistance to moisture and dirt.

The products are installed by gluing to a suitable subfloor (e.g. cement screed, anhydrite screed, or wooden base), in accordance with the manufacturer's instructions. Proper subfloor preparation, indoor climate control (temperature and humidity), and choice of adhesives are essential for ensuring durability and performance.

Maintenance involves regular cleaning and, for finished products, periodic re-oiling or recoating according to the manufacturer's care instructions. Due to their thickness and solid wood structure, the floors can be sanded and renovated several times, ensuring a long service life.

PRODUCT STANDARDS

AST-CJ industrial and solid parquets comply with the following harmonized European standards and specifications:

EN 13226:2018 – Wood flooring – Solid parquet elements with grooves and/or tongues.

EN 13227:2018 – Wood flooring – Solid lamparquet.

EN 13488:2018 – Wood flooring – Solid parquet elements with an overall thickness less than 15 mm.

EN 14342:2013+A1:2009 – Wood flooring – Characteristics, evaluation of conformity and marking.

Compliance with EN 14342 forms the basis for CE marking under Regulation (EU) No 305/2011 (Construction Products Regulation). Products are tested and classified with respect to key performance parameters such as dimensional stability, reaction to fire, release of formaldehyde, thermal conductivity, and durability.

PRODUCT RAW MATERIAL COMPOSITION

Product Raw Material Composition For Parquet Flooring

Id.	Name	Wood	Wood filler	Oil	Lacquer
1.	F-AST Industrial parquet 10 mm, oiled/varnished/unfinished	99.07-100%	0.00-0.40%	0.00-0.13%	0.00-0.53%
2.	F-AST Industrial parquet 15 mm, oiled/varnished/unfinished				
3.	Solid parquet 16 mm, oiled/varnished/unfinished				
4.	Solid parquet 22 mm, oiled/varnished/unfinished				

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

MANUFACTURING AND PACKAGING (A1-A3)

The declared products are solid and industrial parquet flooring manufactured from hardwood. The production process begins with the processing of sawn timber, which is purchased either air-dried (requiring additional kiln drying) or already dried. Raw material is supplied in the form of lumber, boards, and friezes, which are further processed by cutting, planing, and sorting. In the case of industrial parquet, lamellas are pressed into blocks, while for solid parquet the friezes are cut directly into parquet elements.

The finishing stage includes sanding, filling with wood filler, profiling, and surface treatment with oil or lacquer. The finished parquet is packed in cardboard boxes lined with protective foil. The system boundaries cover modules A1–A3: supply and processing of raw materials and auxiliary inputs, main production operations, and packaging of the final product. Electricity is supplied from the national grid and partially from the company's photovoltaic installation, while heat for drying and processing is generated from wooden production waste/pellets.

END OF LIFE (C1, C2, C3, C4, D)

At the end-of-life, during the deconstruction stage, 100% of the parquet flooring is assumed to be manually removed as separated waste, with no additional material or energy use accounted for in this phase (C1). The waste is then transported an average distance of 100 km to a waste treatment facility (C2).

For wooden flooring, it is assumed that 100% of the product undergoes thermal waste treatment by incineration. Incineration is modelled as thermal waste treatment with an overall efficiency below 60% and is therefore reported entirely in Module C4.

In Module D, environmental benefits are credited for the substituted heat and electricity from energy recovery of waste wood and packaging materials, displacing conventional energy production.

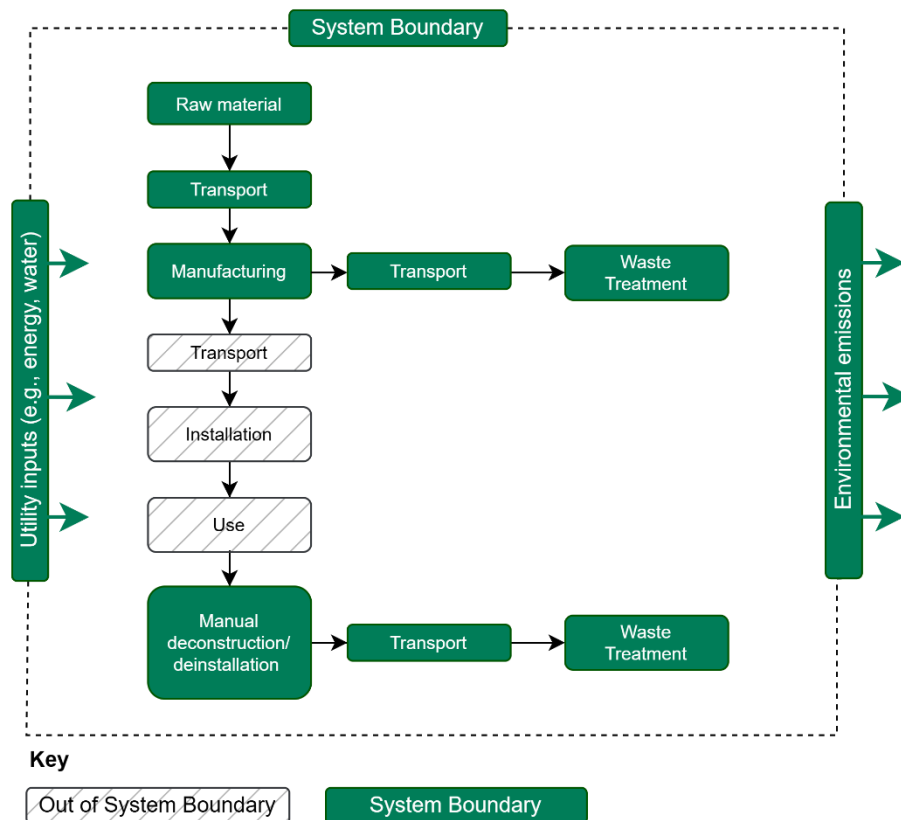


Figure 1 – System Boundary Diagram for Parquet Flooring

LIFE-CYCLE ASSESSMENT

LIFE-CYCLE ASSESSMENT INFORMATION

Period for data 2024 year

DECLARED AND FUNCTIONAL UNIT

Declared unit 1 m² of finished parquet flooring

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

		Biogenic carbon content in product, kg C	Biogenic carbon content in packaging, kg C
1.	F-AST Industrial parquet 10 mm, oiled/varnished/unfinished	3.4	0.06
2.	F-AST Industrial parquet 15 mm, oiled/varnished/unfinished	4.5	0.08
3.	Solid parquet 16 mm, oiled/varnished/unfinished	4.7	0.09
4.	Solid parquet 22 mm, oiled/varnished/unfinished	6.3	0.12

SYSTEM BOUNDARY

The scope of the EPD is cradle to gate with modules C1–C4 and module D. The modules A1 (Raw material supply), A2 (Transport), A3 (Manufacturing), C1 (Deconstruction/Demolition), C2 (Waste transport), C3 (Waste processing), C4 (Waste disposal), and D are included in the study. Modules A4 (Transport to the construction site) and A5 (Installation in the building) are not declared (MND), as this EPD covers the product stage (A1–A3) and the end-of-life stages (C1–C4, D). Installation scenarios vary significantly depending on project conditions and are therefore outside the declared scope.

Product stage		Assembly stage			Use stage							End of life stage				Beyond the system boundaries
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
X	X	X	MND	MND	MND	MND	MND	MND	MND	MND	MND	X	X	X	X	X
Raw materials`	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstr. /Deinstallation	Transport	Waste processing	Disposal	Reuse / Recycling

Modules not declared = MND. Modules not relevant = MNR.

CUT-OFF CRITERIA

The study does not exclude any modules or processes which are stated mandatory in the *EN 15804:2012+A2:2019*. 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 which data are available for are included in the calculation. There is no neglected unit process more than 1% of total mass and energy flows. The total neglected input and output flows do also not exceed 5% of energy usage or mass.

The production of capital equipment, construction activities, and infrastructure, maintenance and operation of capital equipment, personnel-related activities, energy, and water use related to company management and sales activities are excluded.

ESTIMATES AND ASSUMPTIONS

This LCA study is conducted in accordance with all methodological considerations, such as performance, system boundaries, data quality, allocation procedures, and decision rules to evaluate inputs and outputs. All estimations and assumptions are given below:

- **Module (A1-A3):** All relevant data provided by the manufacturer have been included in the assessment. The average transport distances for each input material were calculated based on supplier locations and allocated to the declared unit. Electricity from the national grid and from the company's photovoltaic installation is used to power the production processes, while process heat – in particular for wood drying – is generated from pellets.
- **Module (C1):** At the end of life, parquet flooring is assumed to be manually dismantled without requiring additional equipment or energy.
- **Module (C2):** 100 kms of distance is taken as an average for the transportation of waste to the treatment facilities.
- **Module (C3):** No significant processes are considered in this stage.
- **Module (C4):** It is assumed that 100% of the products undergo thermal waste treatment (the efficiency of the incineration process is below 60%).
- **Module (D):** Benefits are reported for the avoided production of heat and electricity due to energy recovery from the incineration of waste wood and packaging materials.

ALLOCATION

The allocation is carried out in accordance with the provisions of EN 15804. The information provided for the year 2024 includes all floors produced at facilities during that year. The allocation included the following data: LPG, water, electricity, steam, waste, and packaging. For the listed inputs and outputs, the data was compiled by the manufacturer collectively for the entire factory. Due to the similarity in the production processes of other products, a mass allocation approach was used to inventory data for individual products.

Data Quality

For foreground data, the LCA study relies on high-quality primary data gathered by AST-CJ Sp. z o.o.. All relevant background data sets have been sourced from the LCA for Experts, version 10.9.1.19 – software's database Sphera Managed LCA Content Databases v2025 and from available EPD.

Geographic Representativeness

The specified land or region where the product system is manufactured and managed is Poland, Europe.

1. ENVIRONMENTAL IMPACT DATA – INDUSTRIAL PARQUET 10 mm (lacquered / oiled / unfinished) DU = 1m²

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2

Impact category	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Acidification	mol H+e	1.98E-02	MND	MND	MND	0.00E+00	1.22E-04	0.00E+00	2.04E-03	-6.53E-03
Climate change – total	kg CO2e	-3.17E+00	MND	MND	MND	0.00E+00	6.54E-02	0.00E+00	1.26E+01	-5.29E+00
Climate change – fossil	kg CO2e	9.20E+00	MND	MND	MND	0.00E+00	6.62E-02	0.00E+00	2.13E-01	-5.28E+00
Climate change – biogenic	kg CO2e	-1.24E+01	MND	MND	MND	0.00E+00	-1.46E-03	0.00E+00	1.24E+01	-3.38E-03
Climate change – LULUC	kg CO2e	2.64E-02	MND	MND	MND	0.00E+00	6.80E-04	0.00E+00	2.90E-04	-7.09E-04
Abiotic depletion of fossil resources	MJ	1.13E+02	MND	MND	MND	0.00E+00	8.47E-01	0.00E+00	3.02E+00	-6.58E+01
Eutrophication, aquatic freshwater	kg PO4e	1.53E-05	MND	MND	MND	0.00E+00	1.78E-07	0.00E+00	2.25E-07	-1.22E-06
Eutrophication, aquatic marine	kg Ne	6.19E-03	MND	MND	MND	0.00E+00	5.19E-05	0.00E+00	5.97E-04	-1.77E-03
Eutrophication, terrestrial	mol Ne	6.74E-02	MND	MND	MND	0.00E+00	5.55E-04	0.00E+00	8.55E-03	-1.95E-02
Abiotic depletion. minerals & metals	kg Sbe	2.06E-06	MND	MND	MND	0.00E+00	4.39E-09	0.00E+00	1.62E-08	-4.91E-07
Ozone depletion	kg CFC11e	2.74E-09	MND	MND	MND	0.00E+00	1.10E-14	0.00E+00	1.41E-12	-6.44E-11
Photochemical ozone formation	kg NMVOCe	3.47E-02	MND	MND	MND	0.00E+00	1.09E-04	0.00E+00	1.64E-03	-5.08E-03
Water use	m3e depr.	8.94E-01	MND	MND	MND	0.00E+00	3.02E-04	0.00E+00	1.34E+00	-2.37E-02

MND abbreviation stands for Module Not Declared, MNR stands for Module Not Relevant

EN 15804+A2 disclaimer for Abiotic depletion and Water use indicators and all 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 experienced with the indicator.

ADDITIONAL ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Eco-toxicity (freshwater)	CTUe	6.07E+01	MND	MND	MND	0.00E+00	1.10E+00	0.00E+00	1.20E+00	-9.91E+00
Human toxicity, cancer effects	CTUh	1.78E-09	MND	MND	MND	0.00E+00	1.49E-11	0.00E+00	1.25E-10	-6.36E-10
Human toxicity, non-cancer effects	CTUh	4.62E-08	MND	MND	MND	0.00E+00	8.30E-10	0.00E+00	6.46E-09	-8.78E-09
Ionizing radiation, human health	kBq U235e	1.90E-01	MND	MND	MND	0.00E+00	2.30E-04	0.00E+00	2.58E-02	-3.23E-03
Particulate matter	Incidence	1.79E-06	MND	MND	MND	0.00E+00	1.01E-09	0.00E+00	1.37E-08	-6.14E-08
Land use	Pt	2.69E+03	MND	MND	MND	0.00E+00	3.74E-01	0.00E+00	9.15E-01	-1.23E+01

MND abbreviation stands for Module Not Declared, MNR stands for Module Not Relevant

EN 15804+A2 disclaimer for Ionizing 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.

USE OF NATURAL RESOURCES

Impact category	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Use of renewable primary energy resources used as energy carrier (PERE)	MJ	5.98E+01	MND	MND	MND	0.00E+00	6.38E-02	0.00E+00	1.48E+02	-1.89E+01
Use of renewable primary energy resources used as raw materials (PERM)	MJ	1.47E+02	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	-1.47E+02	0.00E+00
Total use of renewable primary energy resources (PERT)	MJ	2.07E+02	MND	MND	MND	0.00E+00	6.38E-02	0.00E+00	8.09E-01	-1.89E+01
Use of non renewable primary energy resources used as energy carrier (PENRE)	MJ	1.17E+02	MND	MND	MND	0.00E+00	8.47E-01	0.00E+00	3.02E+00	-6.58E+01
Use of non renewable primary energy resources used as raw materials (PENRM)	MJ	0.00E+00	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of non renewable primary energy resources (PENRT)	MJ	1.17E+02	MND	MND	MND	0.00E+00	8.47E-01	0.00E+00	3.02E+00	-6.58E+01
Use of non renewable secondary fuels (NRSF)	MJ	1.89E-02	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels (RSF)	MJ	0.00E+00	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of secondary materials (SM)	kg	0.00E+00	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of net fresh water (FW)	m3	1.71E-02	MND	MND	MND	0.00E+00	3.15E-05	0.00E+00	3.15E-02	-6.02E-03

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WASTE

Impact category	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Hazardous waste	kg	1.18E-07	MND	MND	MND	0.00E+00	3.40E-11	0.00E+00	1.60E-09	-4.37E-08
Non-hazardous waste	kg	7.69E-02	MND	MND	MND	0.00E+00	1.18E-04	0.00E+00	2.40E-01	-2.83E-02
Radioactive waste disposed	kg	1.30E-03	MND	MND	MND	0.00E+00	1.60E-06	0.00E+00	1.63E-04	-2.70E-05

OUTPUT FLOWS

Impact category	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Components for reuse	kg	0.00E+00	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	0.00E+00	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	0.00E+00	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy electrical	MJ	5.03E-02	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	1.70E+01	-1.70E+01
Exported energy thermal	MJ	9.04E-02	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	3.06E+01	-3.07E+01

2. ENVIRONMENTAL IMPACT DATA – INDUSTRIAL PARQUET 15 mm (lacquered / oiled / unfinished) DU = 1m²

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2

Impact category	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Acidification	mol H ⁺ e	2.64E-02	MND	MND	MND	0.00E+00	1.63E-04	0.00E+00	2.73E-03	-8.72E-03
Climate change – total	kg CO ₂ e	-4.26E+00	MND	MND	MND	0.00E+00	8.74E-02	0.00E+00	1.68E+01	-7.06E+00
Climate change – fossil	kg CO ₂ e	1.23E+01	MND	MND	MND	0.00E+00	8.84E-02	0.00E+00	2.84E-01	-7.05E+00
Climate change – biogenic	kg CO ₂ e	-1.66E+01	MND	MND	MND	0.00E+00	-1.95E-03	0.00E+00	1.65E+01	-4.51E-03
Climate change – LULUC	kg CO ₂ e	3.54E-02	MND	MND	MND	0.00E+00	9.08E-04	0.00E+00	3.88E-04	-9.47E-04
Abiotic depletion of fossil resources	MJ	1.51E+02	MND	MND	MND	0.00E+00	1.13E+00	0.00E+00	4.04E+00	-8.78E+01
Eutrophication, aquatic freshwater	kg PO ₄ e	2.05E-05	MND	MND	MND	0.00E+00	2.38E-07	0.00E+00	3.01E-07	-1.63E-06
Eutrophication, aquatic marine	kg Ne	8.27E-03	MND	MND	MND	0.00E+00	6.93E-05	0.00E+00	7.97E-04	-2.36E-03
Eutrophication, terrestrial	mol Ne	9.01E-02	MND	MND	MND	0.00E+00	7.41E-04	0.00E+00	1.14E-02	-2.60E-02
Abiotic depletion, minerals & metals	kg Sbe	2.75E-06	MND	MND	MND	0.00E+00	5.87E-09	0.00E+00	2.16E-08	-6.55E-07
Ozone depletion	kg CFC11e	3.65E-09	MND	MND	MND	0.00E+00	1.46E-14	0.00E+00	1.89E-12	-8.59E-11
Photochemical ozone formation	kg NMVOCe	4.65E-02	MND	MND	MND	0.00E+00	1.46E-04	0.00E+00	2.19E-03	-6.78E-03
Water use	m ³ e depr.	1.19E+00	MND	MND	MND	0.00E+00	4.03E-04	0.00E+00	1.79E+00	-3.16E-02

MND abbreviation stands for Module Not Declared, MNR stands for Module Not Relevant

EN 15804+A2 disclaimer for Abiotic depletion and Water use indicators and all 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 experienced with the indicator.

ADDITIONAL ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Eco-toxicity (freshwater)	CTUe	8.11E+01	MND	MND	MND	0.00E+00	1.47E+00	0.00E+00	1.60E+00	-1.32E+01
Human toxicity. cancer effects	CTUh	2.38E-09	MND	MND	MND	0.00E+00	1.98E-11	0.00E+00	1.66E-10	-8.49E-10
Human toxicity. non-cancer effects	CTUh	6.18E-08	MND	MND	MND	0.00E+00	1.11E-09	0.00E+00	8.62E-09	-1.17E-08
Ionizing radiation, human health	kBq U235e	2.54E-01	MND	MND	MND	0.00E+00	3.06E-04	0.00E+00	3.44E-02	-4.31E-03
Particulate matter	Incidence	2.39E-06	MND	MND	MND	0.00E+00	1.35E-09	0.00E+00	1.83E-08	-8.20E-08
Land use	Pt	3.60E+03	MND	MND	MND	0.00E+00	5.00E-01	0.00E+00	1.22E+00	-1.64E+01

MND abbreviation stands for Module Not Declared, MNR stands for Module Not Relevant

EN 15804+A2 disclaimer for Ionizing 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.

USE OF NATURAL RESOURCES

Impact category	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Use of renewable primary energy resources used as energy carrier (PERE)	MJ	7.71E+01	MND	MND	MND	0.00E+00	8.52E-02	0.00E+00	1.98E+02	-2.53E+01
Use of renewable primary energy resources used as raw materials (PERM)	MJ	1.97E+02	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	-1.97E+02	0.00E+00
Total use of renewable primary energy resources (PERT)	MJ	2.74E+02	MND	MND	MND	0.00E+00	8.52E-02	0.00E+00	1.08E+00	-2.53E+01
Use of non renewable primary energy resources used as energy carrier (PENRE)	MJ	1.56E+02	MND	MND	MND	0.00E+00	1.13E+00	0.00E+00	4.04E+00	-8.78E+01
Use of non renewable primary energy resources used as raw materials (PENRM)	MJ	0.00E+00	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of non renewable primary energy resources (PENRT)	MJ	1.56E+02	MND	MND	MND	0.00E+00	1.13E+00	0.00E+00	4.04E+00	-8.78E+01
Use of non renewable secondary fuels (NRSF)	MJ	2.52E-02	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels (RSF)	MJ	0.00E+00	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of secondary materials (SM)	kg	0.00E+00	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of net fresh water (FW)	m3	2.28E-02	MND	MND	MND	0.00E+00	4.21E-05	0.00E+00	4.21E-02	-8.04E-03

MND abbreviation stands for Module Not Declared, MNR stands for Module Not Relevant

WASTE

Impact category	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Hazardous waste	kg	1.57E-07	MND	MND	MND	0.00E+00	4.53E-11	0.00E+00	2.14E-09	-5.83E-08
Non-hazardous waste	kg	1.03E-01	MND	MND	MND	0.00E+00	1.58E-04	0.00E+00	3.20E-01	-3.78E-02
Radioactive waste disposed	kg	1.74E-03	MND	MND	MND	0.00E+00	2.13E-06	0.00E+00	2.18E-04	-3.61E-05

OUTPUT FLOWS

Impact category	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Components for reuse	kg	0.00E+00	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	0.00E+00	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	0.00E+00	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy electrical	MJ	6.71E-02	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	2.27E+01	-2.27E+01
Exported energy thermal	MJ	1.21E-01	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	4.08E+01	-4.10E+01

3. ENVIRONMENTAL IMPACT DATA – SOLID PARQUET 16 mm (lacquered / oiled / unfinished) DU = 1m²

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2

Impact category	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Acidification	mol H ⁺ e	2.48E-02	MND	MND	MND	0.00E+00	1.67E-04	0.00E+00	2.81E-03	-8.97E-03
Climate change – total	kg CO ₂ e	-5.86E+00	MND	MND	MND	0.00E+00	8.98E-02	0.00E+00	1.74E+01	-7.25E+00
Climate change – fossil	kg CO ₂ e	1.12E+01	MND	MND	MND	0.00E+00	9.09E-02	0.00E+00	2.92E-01	-7.25E+00
Climate change – biogenic	kg CO ₂ e	-1.71E+01	MND	MND	MND	0.00E+00	-2.01E-03	0.00E+00	1.71E+01	-4.64E-03
Climate change – LULUC	kg CO ₂ e	3.61E-02	MND	MND	MND	0.00E+00	9.33E-04	0.00E+00	3.98E-04	-9.73E-04
Abiotic depletion of fossil resources	MJ	1.41E+02	MND	MND	MND	0.00E+00	1.16E+00	0.00E+00	4.15E+00	-9.03E+01
Eutrophication, aquatic freshwater	kg PO ₄ e	2.06E-05	MND	MND	MND	0.00E+00	2.44E-07	0.00E+00	3.09E-07	-1.67E-06
Eutrophication, aquatic marine	kg Ne	7.98E-03	MND	MND	MND	0.00E+00	7.12E-05	0.00E+00	8.19E-04	-2.43E-03
Eutrophication, terrestrial	mol Ne	8.70E-02	MND	MND	MND	0.00E+00	7.61E-04	0.00E+00	1.17E-02	-2.67E-02
Abiotic depletion, minerals & metals	kg Sbe	2.52E-06	MND	MND	MND	0.00E+00	6.03E-09	0.00E+00	2.22E-08	-6.73E-07
Ozone depletion	kg CFC11e	3.70E-09	MND	MND	MND	0.00E+00	1.50E-14	0.00E+00	1.94E-12	-8.83E-11
Photochemical ozone formation	kg NMVOCe	4.64E-02	MND	MND	MND	0.00E+00	1.50E-04	0.00E+00	2.25E-03	-6.97E-03
Water use	m ³ e depr.	1.22E+00	MND	MND	MND	0.00E+00	4.15E-04	0.00E+00	1.84E+00	-3.25E-02

MND abbreviation stands for Module Not Declared, MNR stands for Module Not Relevant

EN 15804+A2 disclaimer for Abiotic depletion and Water use indicators and all 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 experienced with the indicator.

ADDITIONAL ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Eco-toxicity (freshwater)	CTUe	7.92E+01	MND	MND	MND	0.00E+00	1.51E+00	0.00E+00	1.64E+00	-1.36E+01
Human toxicity, cancer effects	CTUh	2.27E-09	MND	MND	MND	0.00E+00	2.04E-11	0.00E+00	1.71E-10	-8.72E-10
Human toxicity, non-cancer effects	CTUh	5.98E-08	MND	MND	MND	0.00E+00	1.14E-09	0.00E+00	8.86E-09	-1.20E-08
Ionizing radiation, human health	kBq U235e	2.60E-01	MND	MND	MND	0.00E+00	3.15E-04	0.00E+00	3.54E-02	-4.43E-03
Particulate matter	Incidence	2.44E-06	MND	MND	MND	0.00E+00	1.38E-09	0.00E+00	1.88E-08	-8.43E-08
Land use	Pt	3.70E+03	MND	MND	MND	0.00E+00	5.14E-01	0.00E+00	1.26E+00	-1.69E+01

MND abbreviation stands for Module Not Declared, MNR stands for Module Not Relevant

EN 15804+A2 disclaimer for Ionizing 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.

USE OF NATURAL RESOURCES

Impact category	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Use of renewable primary energy resources used as energy carrier (PERE)	MJ	6.69E+01	MND	MND	MND	0.00E+00	8.76E-02	0.00E+00	2.04E+02	-2.60E+01
Use of renewable primary energy resources used as raw materials (PERM)	MJ	2.03E+02	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	-2.03E+02	0.00E+00
Total use of renewable primary energy resources (PERT)	MJ	2.70E+02	MND	MND	MND	0.00E+00	8.76E-02	0.00E+00	1.11E+00	-2.60E+01
Use of non renewable primary energy resources used as energy carrier (PENRE)	MJ	1.46E+02	MND	MND	MND	0.00E+00	1.16E+00	0.00E+00	4.15E+00	-9.03E+01
Use of non renewable primary energy resources used as raw materials (PENRM)	MJ	0.00E+00	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of non renewable primary energy resources (PENRT)	MJ	1.46E+02	MND	MND	MND	0.00E+00	1.16E+00	0.00E+00	4.15E+00	-9.03E+01
Use of non renewable secondary fuels (NRSF)	MJ	2.59E-02	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels (RSF)	MJ	0.00E+00	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of secondary materials (SM)	kg	0.00E+00	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of net fresh water (FW)	m3	2.07E-02	MND	MND	MND	0.00E+00	4.33E-05	0.00E+00	4.33E-02	-8.26E-03

PER abbreviation stands for primary energy resources

MND abbreviation stands for Module Not Declared, MNR stands for Module Not Relevant

WASTE

Impact category	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Hazardous waste	kg	1.40E-07	MND	MND	MND	0.00E+00	4.66E-11	0.00E+00	2.20E-09	-5.99E-08
Non-hazardous waste	kg	9.48E-02	MND	MND	MND	0.00E+00	1.62E-04	0.00E+00	3.29E-01	-3.89E-02
Radioactive waste disposed	kg	1.78E-03	MND	MND	MND	0.00E+00	2.19E-06	0.00E+00	2.24E-04	-3.71E-05

OUTPUT FLOWS

Impact category	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Components for reuse	kg	0.00E+00	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	0.00E+00	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	0.00E+00	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy electrical	MJ	6.90E-02	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	2.33E+01	-2.34E+01
Exported energy thermal	MJ	1.24E-01	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	4.20E+01	-4.21E+01

4. ENVIRONMENTAL IMPACT DATA – SOLID PARQUET 22 mm (lacquered / oiled / unfinished) DU = 1m²

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2

Impact category	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Acidification	mol H ⁺ e	3.37E-02	MND	MND	MND	0.00E+00	2.27E-04	0.00E+00	3.82E-03	-1.22E-02
Climate change – total	kg CO ₂ e	-8.05E+00	MND	MND	MND	0.00E+00	1.22E-01	0.00E+00	2.36E+01	-9.87E+00
Climate change – fossil	kg CO ₂ e	1.52E+01	MND	MND	MND	0.00E+00	1.24E-01	0.00E+00	3.97E-01	-9.86E+00
Climate change – biogenic	kg CO ₂ e	-2.33E+01	MND	MND	MND	0.00E+00	-2.73E-03	0.00E+00	2.32E+01	-6.31E-03
Climate change – LULUC	kg CO ₂ e	4.92E-02	MND	MND	MND	0.00E+00	1.27E-03	0.00E+00	5.42E-04	-1.32E-03
Abiotic depletion of fossil resources	MJ	1.92E+02	MND	MND	MND	0.00E+00	1.58E+00	0.00E+00	5.64E+00	-1.23E+02
Eutrophication, aquatic freshwater	kg PO ₄ e	2.80E-05	MND	MND	MND	0.00E+00	3.33E-07	0.00E+00	4.21E-07	-2.28E-06
Eutrophication, aquatic marine	kg Ne	1.09E-02	MND	MND	MND	0.00E+00	9.69E-05	0.00E+00	1.11E-03	-3.30E-03
Eutrophication, terrestrial	mol Ne	1.18E-01	MND	MND	MND	0.00E+00	1.04E-03	0.00E+00	1.60E-02	-3.63E-02
Abiotic depletion, minerals & metals	kg Sbe	3.42E-06	MND	MND	MND	0.00E+00	8.20E-09	0.00E+00	3.02E-08	-9.16E-07
Ozone depletion	kg CFC11e	5.04E-09	MND	MND	MND	0.00E+00	2.05E-14	0.00E+00	2.64E-12	-1.20E-10
Photochemical ozone formation	kg NMVOCe	6.31E-02	MND	MND	MND	0.00E+00	2.04E-04	0.00E+00	3.06E-03	-9.48E-03
Water use	m ³ e depr.	1.65E+00	MND	MND	MND	0.00E+00	5.64E-04	0.00E+00	2.50E+00	-4.42E-02

MND abbreviation stands for Module Not Declared, MNR stands for Module Not Relevant

EN 15804+A2 disclaimer for Abiotic depletion and Water use indicators and all 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 experienced with the indicator.

ADDITIONAL ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Eco-toxicity (freshwater)	CTUe	1.08E+02	MND	MND	MND	0.00E+00	2.06E+00	0.00E+00	2.23E+00	-1.85E+01
Human toxicity, cancer effects	CTUh	3.08E-09	MND	MND	MND	0.00E+00	2.77E-11	0.00E+00	2.32E-10	-1.19E-09
Human toxicity, non-cancer effects	CTUh	8.14E-08	MND	MND	MND	0.00E+00	1.55E-09	0.00E+00	1.21E-08	-1.64E-08
Ionizing radiation, human health	kBq U235e	3.54E-01	MND	MND	MND	0.00E+00	4.28E-04	0.00E+00	4.82E-02	-6.02E-03
Particulate matter	Incidence	3.32E-06	MND	MND	MND	0.00E+00	1.88E-09	0.00E+00	2.55E-08	-1.15E-07
Land use	Pt	5.04E+03	MND	MND	MND	0.00E+00	6.99E-01	0.00E+00	1.71E+00	-2.29E+01

MND abbreviation stands for Module Not Declared, MNR stands for Module Not Relevant

EN 15804+A2 disclaimer for Ionizing 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.

USE OF NATURAL RESOURCES

Impact category	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Use of renewable primary energy resources used as energy carrier (PERE)	MJ	9.20E+01	MND	MND	MND	0.00E+00	1.19E-01	0.00E+00	2.78E+02	-3.54E+01
Use of renewable primary energy resources used as raw materials (PERM)	MJ	2.76E+02	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	-2.76E+02	0.00E+00
Total use of renewable primary energy resources (PERT)	MJ	3.68E+02	MND	MND	MND	0.00E+00	1.19E-01	0.00E+00	1.51E+00	-3.54E+01
Use of non renewable primary energy resources used as energy carrier (PENRE)	MJ	1.99E+02	MND	MND	MND	0.00E+00	1.58E+00	0.00E+00	5.64E+00	-1.23E+02
Use of non renewable primary energy resources used as raw materials (PENRM)	MJ	0.00E+00	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of non renewable primary energy resources (PENRT)	MJ	1.99E+02	MND	MND	MND	0.00E+00	1.58E+00	0.00E+00	5.64E+00	-1.23E+02
Use of non renewable secondary fuels (NRSF)	MJ	3.52E-02	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels (RSF)	MJ	0.00E+00	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of secondary materials (SM)	kg	0.00E+00	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of net fresh water (FW)	m3	2.81E-02	MND	MND	MND	0.00E+00	5.89E-05	0.00E+00	5.89E-02	-1.12E-02

MND abbreviation stands for Module Not Declared, MNR stands for Module Not Relevant

WASTE

Impact category	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Hazardous waste	kg	1.91E-07	MND	MND	MND	0.00E+00	6.34E-11	0.00E+00	3.00E-09	-8.15E-08
Non-hazardous waste	kg	1.29E-01	MND	MND	MND	0.00E+00	2.21E-04	0.00E+00	4.48E-01	-5.29E-02
Radioactive waste disposed	kg	2.42E-03	MND	MND	MND	0.00E+00	2.98E-06	0.00E+00	3.04E-04	-5.04E-05

OUTPUT FLOWS

Impact category	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Components for reuse	kg	0.00E+00	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	0.00E+00	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	0.00E+00	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy electrical	MJ	9.39E-02	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	3.17E+01	-3.18E+01
Exported energy thermal	MJ	1.69E-01	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	5.71E+01	-5.73E+01

SCENARIO DOCUMENTATION

Manufacturing energy scenario documentation

Scenario parameter	Value
Electricity data source and quality	Electricity, medium voltage, production mix (Reference product: electricity, medium voltage), Poland, 2024
Electricity CO ₂ eq./ kWh	0.664 kg CO ₂ eq./ kWh

End of life scenario documentation

Scenario parameter	Value
Collection process – % collected separately	100
Collection process – % collected with mixed waste	-
Recovery process – % for re-use	-
% for recycling	-
% for final deposition	-
% for thermal waste treatment	100
Scenario assumptions for transportation	End-of-life product is transported 100 km with Truck, Euro mix, 24.7t payload capacity

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EPD VERIFICATION:

The verification procedure for this Environmental Product Declaration (EPD) has been carried out in accordance with the requirements of ISO 14025 standards. Once the verification process is complete, the EPD remains valid for a period of 5 years. There is no need to recalculate the parameters contained in the EPD after this period, provided that the data underlying the declaration have not changed substantially.

EPD CONTRIBUTORS

Manufacturer representative

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Note: The sole ownership, liability, and liability of this declaration are with the owner. Construction product declarations may not be comparable if they do not comply with EN 15804. For detailed information on comparability, please refer to EN 15804 and ISO 14025.

EPD Polska Certificate



CERTIFICATE

TYPE III EPD DECLARATION

(ENVIRONMENTAL PRODUCT DECLARATION)

Reg. No. EPD-P 04.09.2025



This document confirms that the Environmental Product Declaration developed by **AST-CJ Sp. z o.o.** for

Solid and Industrial Parquet Flooring

manufactured in accordance with standards:

EN 13226:2018, EN 13227:2018 and EN 14342:2013+A1:2009,

meets the requirements of standards **EN 15804:2012+A2:2019** and **ISO 14025**, and that the data contained therein has been prepared correctly.

The Declaration was published on September 25, 2025 and is valid until September 25, 2030, or until it is deregistered or its publication on the website www.epd.org.pl is discontinued.

Authenticity of this certificate can be confirmed in the public register at www.epd.org.pl



Daniel Wałach, Ph.D.
EPD Polska Verifier



Grzegorz Suwara
CEO Multicert Sp. z o.o.

Warsaw, September 25, 2025