ENVIRONMENTAL PRODUCT DECLARATION

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

Message Series
Asahi Woodtec Co., Ltd.

EPD HUB, HUB-1407
Published on 17.05.2024, last updated on 22.08.2024, valid until 17.05.2029

Created with One Click LCA

一般情報 - GENERAL INFORMATION

メーカー - MANUFACTURER

メーカー名 Manufacturer	Asahi Woodtec Co., Ltd.
住所 Address	4-5-10 Minamihonmachi, Chuo-ku, Osaka City, Osaka
問い合わせ先 Contact details	sakaes@woodtec.co.jp
ウェブサイト Website	https://www.woodtec.co.jp

EPD 規格、スコープ、認証機関 - EPD STANDARDS, SCOPE AND VERIFICATION

プログラムオペレータ Program operator	EPD Hub, hub@epdhub.com
参照規格 Reference standard	EN 15804+A2:2019 and ISO 14025
PCR PCR	EPD Hub Core PCR Version 1.1, 5 Dec 2023
製品カテゴリ Sector	Construction product
EPD カテゴリ Category of EPD	Third party verified EPD
EPD のスコープ Scope of the EPD	Cradle to gate with modules C1-C4, D
EPD 申請者 EPD author	Satoshi Sakae
EPD 検証 EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal verification ☑ External verification
EPD 検証 EPD verifier	Haiha Nguyen, as an authorized verifier acting for EPD Hub Limited

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.

製品 - PRODUCT

製品名 Product name	Message Series
追加ラベル Additional labels	
参照製品 Product reference	PMT3KJ48KSS,PMT3KJ17KSS,PMT3KJ02KSS,PMT3KJ05KSS,PMT3FKJ05KSS,PMT5FKJ74KSS,PMT3KJ10KSS,PMT3KJ09KSS,PMT2DS48S,PMT2DS48RS,PMT2DS17S,PMT2DS17RS,PMT2DS02S,PMT2DS02RS,PMT2DS05S,PMT2DS05RS,PMT2DS49RS,PMT2DS10S,PMT2DS53S,PMT2DSM0105S,PMT2DSM0205S,PMT2DSM0305S,PMT2DSM0405S,PMT2DSM0505S,PBTA6DS48S,PBTA6DS48RS,PBTA6DS17S,PBTA6DS17RS,PBTA6DS02S,PBTA6DS02RS,PBTA6DS05S,PBTA6DS05RS,PBTA6DS49RS,PBTA6DS10S,PBTA6DS53S,PBTA6DSM0105S,PBTA6DSM0205S,PBTA6DSM0305S,PBTA6DSM0405S,PBTA6DSM0505S,PBTAWDS48S,PBTAWDS48RS,PBTA

	WDS17S,PBTAWDS17RS,PBTAWDS02S,PBTAWDS02RS,PBTAWDS05S,PBTAWDS05RS,PBTAWDS49RS,PBTAWDS10S,PBTAWDS53S
製造地 Place of production	Niihama, Tadaoka-cho, Senboku-gun, Osaka
データ取得年 Period for data	1st April 2022~31st March 2023
EPD 平均化 Averaging in EPD	Multiple products
A1-A3 の GWP-fossil 変動率 Variation in GWP-fossil for A1-A3	1.3 %

環境影響データ概要 - ENVIRONMENTAL DATA SUMMARY

宣言単位 Declared unit	1 m2
宣言単位あたりの質量 Declared unit mass	7.926 kg
GWP-fossil, A1-A3 (kgCO2e) GWP-fossil, A1-A3 (kgCO2e)	1,74E+01
GWP-total, A1-A3 (kgCO2e) GWP-total, A1-A3 (kgCO2e)	-5,95E+00
副資材の投入(%) Secondary material, inputs (%)	0.54
副資材のアウトプット(%) Secondary material, outputs (%)	100
エネルギー使用量計, A1-A3 (kWh) Total energy use, A1-A3 (kWh)	155
水使用量計、A1-A3 (m3) Net fresh water use, A1-A3 (m3)	0.35

製品とメーカー-PRODUCT AND MANUFACTURER

メーカーの概要 - ABOUT THE MANUFACTURER

Founded in 1952, Asahi Woodtec is a manufacturer and distributor of wooden interior building materials in Japan. With its origins in the lumber industry, the manufacturer aims to be a demand-creating manufacturer that maximises the potential of wood and provides innnovative value for peoples lives. As part of its decarbonisation efforts, it obtained SBT certification in April 2021, and joined the 100 Renewable Energy Declaration RE Action in May 2021.

製品説明 - PRODUCT DESCRIPTION

The product is an wooden interior flooring with 12mm of thickness which consists of facing lumber and plywood, from the surface. The facing lumber on the surface are variated among oak, walnut, cherry, maple, birch, ash, cypress, and sapele. The surface design makes use of the grain and character of natural wood.It has antiviral, anti bacterial, chemical and pollution resistance and indoor air quality performance. It is installed with adhesives and nails as an interior flooring material in public properties and houses. It is scratch-resistant and durable enough to be used on dirt floors.

Further information can be found at https://www.woodtec.co.jp.

主な原材料構成 - PRODUCT RAW MATERIAL MAIN COMPOSITION

原材料カテゴリ Raw material category	量、質量 - % Amount, mass- %	原材料源 Material origin
金属 Metals	0	
鉱物 Minerals	0	
化石原料 Fossil materials	3	Japan
バイオマス原料 Bio-based materials	97	China,Europe,Japan

生物起源 CO2 含有量 - BIOGENIC CARBON CONTENT

Product’s biogenic carbon content at the factory gate

製品の生物起源 CO2 含有量、kg C Biogenic carbon content in product, kg C	4.1
梱包の生物起源 CO2 含有量、kg C Biogenic carbon content in packaging, kg C	0.0027

機能単位と耐用年数 - FUNCTIONAL UNIT AND SERVICE LIFE

宣言単位 Declared unit	1 m2
宣言単位あたりの質量 Mass per declared unit VP	7.926 kg
機能単位 Functional unit	
参照耐用年数 Reference service life	

化学物質、REACH 高懸念物質 - SUBSTANCES, REACH - VERY HIGH CONCERN

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

製品のライフサイクル - PRODUCT LIFE-CYCLE

システム境界 - SYSTEM BOUNDARY

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

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./demol.	Transport	Waste processing	Disposal	Reuse	Recovery	Recycling

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

製造と梱包 - 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.

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輸送と据付 - 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.

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.As A4-A5 is excluded from this study, packaging wastes are considered in the end-of-life stage.

製品使用とメンテナンス - PRODUCT USE AND MAINTENANCE (B1-B7)

This EPD does not cover the use phase.

製品の廃棄・リサイクル段階 - PRODUCT END OF LIFE (C1-C4, D)

In this EPD, end-of-life scenarios are developed for each material categories. Energy considered for demolition of building (C1) is considered negligible and transportation distance and method to the treatment facility (C2) is assumed to be 50km by a truck in all scenarios.

Wooden materials:
At the end of its lifetime, a timber product can have several end of life scenario options. Because of the uncertainties surrounding waste disposal practices in the future, exact methods of disposal at the end of its lifeime is hard to determine. In this EPD, 100% of the product waste is assumed to be collected and incinerated for energy recovery. Electricity and heat recovered from the wood wastes are declared in module D as benefit.

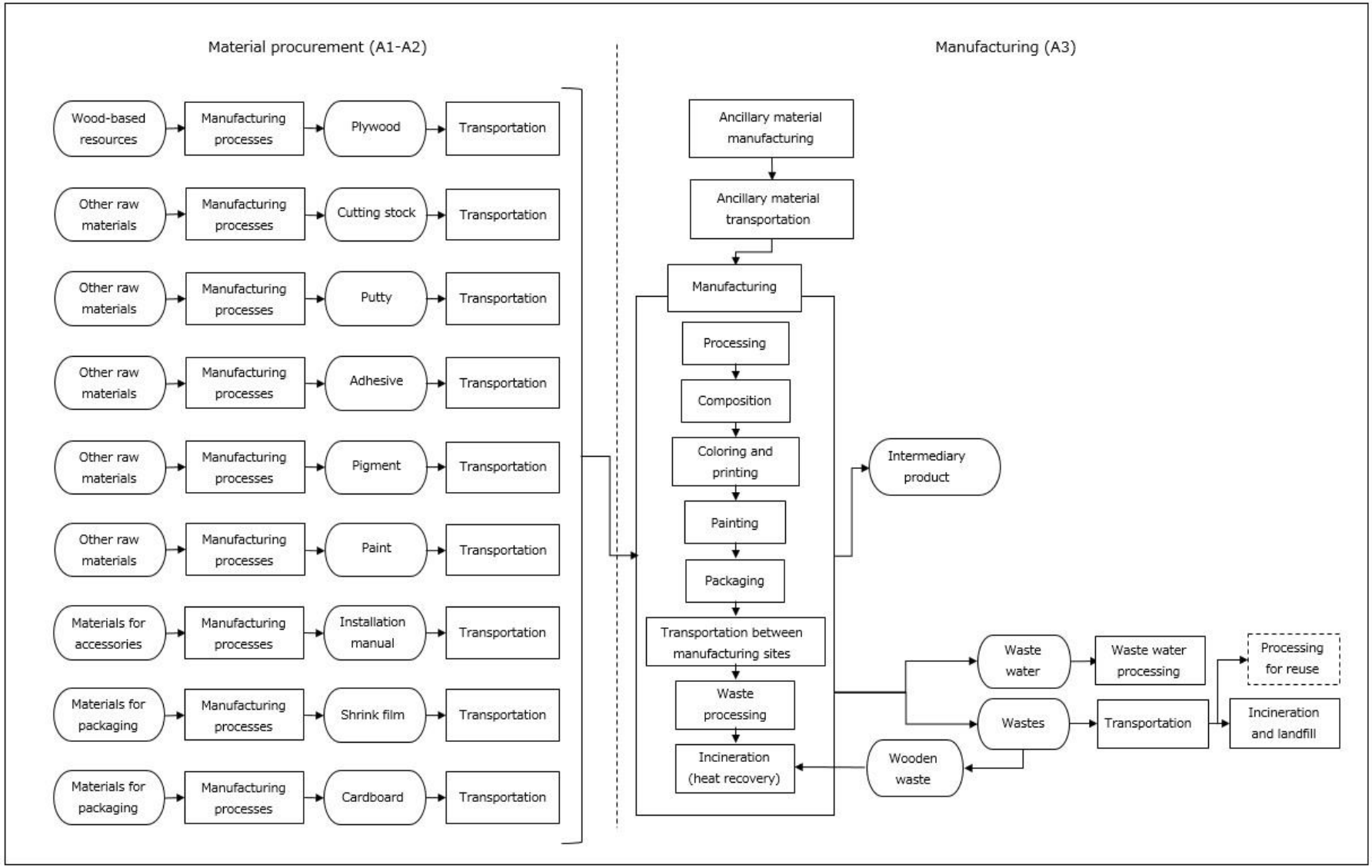
As this EPD excludes A5, packaging wastes are declared in the EOL stage.

Paperboard (packaging):
According to the website of Corrugated Packaging Recycling Council, 94.8% of the waste paperboard are collected at proper facilities. Therefore, EOL scenario of paperboard is assumed to be 94.8% recycled and 5.2% incinerated without energy recovery. Loads of processing for recycling and benefits of avoided virgin paperboard production are declared in module D.

Paper (instruction manual):
For paper wastes, EOL scenario is assumed to be 66.3% recycled and 33.7% incinerated according to the statistics published by Paper Recycling Promotion Center in Japan. Loads of processing for recycling and benefits of avoided virgin paper production are declared in module D.

Polyethylene film (packaging):
The EOL scenario is assumed to be 25% recycled, 57% energy recovery, 10% incinerated and 8% landfilled based on the report published by Ministry of Environment. Loads of processing for recycling and benefits of avoided virgin PE production and recovered energy are declared in module D.

製造プロセス - MANUFACTURING PROCESS



ライフサイクルアセスメント - LIFE-CYCLE ASSESSMENT

カットオフ基準 - 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.

配分、推定 - 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:

データタイプ - Data type	配分 - Allocation
原材料 - Raw materials	Partly allocated by mass or volume
梱包材 - Packaging materials	Allocated by mass or volume
補助材料 - Ancillary materials	Allocated by mass or volume
製造エネルギーと廃棄物 - Manufacturing energy and waste	Allocated by mass or volume

平均値と変動率 - AVERAGES AND VARIABILITYVP

平均化の種類 - Type of average	Multiple products
平均化の方法 - Averaging method	Representative product
A1-A3 における GWP-fossil の変動率 - Variation in GWP-fossil for A1-A3	1.3 %

This EPD covers two types of products: one is installed with adhesive for wood substrate and nails (without cushion sheet), and one is installed only with adhesive for concrete substrate (with cushion sheet). As the product for wooden substrate (without cushion) is much larger in production volume compared to the other one, LCA results of the product for wooden substrate (without cushion) are included in this EPD as a representative product.These two types of products are manufactured at the same production site, and have the same manufacturing processes up to the middle of the process, then sent to different finishing processes (latter processing~packaging) in the end. The variability of A1-A3 GWP-fossil between both products is about 1.3%.

LCA ソフトウェアと参考文献 - 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. Ecoinvent v3.8 and One Click LCA databases were used as sources of environmental data.

環境影響データ - ENVIRONMENTAL IMPACT DATA

主な環境影響指標 - 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	C3	C4	D
GWP – total[1)]	kg CO_2e	-1,30E+01	2,70E+00	4,38E+00	-5,95E+00	MND	MND	MND	MND	MND	MND	MND	MND	MND	MNR	5,65E-02	2,36E+01	1,84E-04	-2,08E+00
GWP – fossil	kg CO_2e	1,20E+01	2,70E+00	2,72E+00	1,74E+01	MND	MND	MND	MND	MND	MND	MND	MND	MND	MNR	5,65E-02	1,59E-01	1,93E-04	-2,07E+00
GWP – biogenic	kg CO_2e	-2,51E+01	0,00E+00	1,65E+00	-2,34E+01	MND	MND	MND	MND	MND	MND	MND	MND	MND	MNR	0,00E+00	2,34E+01	-9,25E-06	0,00E+00
GWP – LULUC	kg CO_2e	4,00E-02	1,56E-03	1,05E-02	5,21E-02	MND	MND	MND	MND	MND	MND	MND	MND	MND	MNR	2,48E-05	4,50E-05	1,46E-08	-6,29E-03
Ozone depletion pot.	kg CFC_{-11}e	1,56E-06	5,53E-07	1,40E-07	2,25E-06	MND	MND	MND	MND	MND	MND	MND	MND	MND	MNR	1,25E-08	8,66E-09	4,17E-12	-4,47E-08
Acidification potential	mol H^+e	8,89E-02	3,62E-02	1,22E-02	1,37E-01	MND	MND	MND	MND	MND	MND	MND	MND	MND	MNR	3,11E-04	1,33E-03	1,19E-07	-1,02E-02
EP-freshwater[2)]	kg Pe	6,90E-04	1,99E-05	8,07E-05	7,90E-04	MND	MND	MND	MND	MND	MND	MND	MND	MND	MNR	4,96E-07	1,82E-06	2,29E-10	-5,95E-05
EP-marine	kg Ne	2,53E-02	8,62E-03	1,93E-03	3,59E-02	MND	MND	MND	MND	MND	MND	MND	MND	MND	MNR	1,08E-04	6,26E-04	7,33E-08	-1,45E-03
EP-terrestrial	mol Ne	2,81E-01	9,59E-02	2,13E-02	3,98E-01	MND	MND	MND	MND	MND	MND	MND	MND	MND	MNR	1,19E-03	6,65E-03	4,39E-07	-1,62E-02
POCP (“smog”)[3)]	kg NMVOCe	8,16E-02	2,61E-02	6,56E-03	1,14E-01	MND	MND	MND	MND	MND	MND	MND	MND	MND	MNR	3,42E-04	1,64E-03	1,69E-07	-5,08E-03
ADP-minerals & metals[4)]	kg Sbe	6,86E-05	9,25E-06	4,29E-06	8,21E-05	MND	MND	MND	MND	MND	MND	MND	MND	MND	MNR	1,93E-07	4,17E-07	4,73E-11	-2,31E-06
ADP-fossil resources	MJ	1,68E+02	3,69E+01	3,64E+01	2,41E+02	MND	MND	MND	MND	MND	MND	MND	MND	MND	MNR	8,32E-01	1,09E+00	3,20E-04	-2,65E+01
Water use[5)]	m^3e depr.	1,64E+01	1,56E-01	7,32E-01	1,73E+01	MND	MND	MND	MND	MND	MND	MND	MND	MND	MNR	3,82E-03	5,32E-01	1,93E-06	-4,14E-03

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.

追加(オプション)の環境影響指標 - 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	1,80E-06	1,49E-07	5,61E-08	2,00E-06	MND	MND	MND	MND	MND	MND	MND	MND	MND	MNR	6,03E-09	1,59E-08	2,37E-12	-2,30E-08
Ionizing radiation[6)]	kBq U235e	3,75E+01	1,71E-01	2,05E-01	3,79E+01	MND	MND	MND	MND	MND	MND	MND	MND	MND	MNR	3,91E-03	2,52E-03	1,55E-06	-2,44E-01
Ecotoxicity (freshwater)	CTUe	4,31E+02	3,16E+01	3,90E+01	5,02E+02	MND	MND	MND	MND	MND	MND	MND	MND	MND	MNR	7,73E-01	3,00E+00	3,43E-04	-2,03E+01
Human toxicity, cancer	CTUh	7,25E-08	1,32E-09	9,69E-10	7,48E-08	MND	MND	MND	MND	MND	MND	MND	MND	MND	MNR	2,64E-11	3,68E-10	1,05E-14	-6,25E-10
Human tox. non-cancer	CTUh	2,67E-07	2,55E-08	2,06E-08	3,13E-07	MND	MND	MND	MND	MND	MND	MND	MND	MND	MNR	7,86E-10	1,69E-08	2,03E-13	-1,08E-08
SQP[7)]	-	2,55E+03	1,64E+01	1,05E+01	2,58E+03	MND	MND	MND	MND	MND	MND	MND	MND	MND	MNR	7,13E-01	3,67E-01	7,71E-04	6,36E+00

6) 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; 7) SQP = Land use related impacts/soil quality.

天然資源の利用 - 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	3,47E+02	4,22E-01	3,43E+00	3,51E+02	MND	MND	MND	MND	MND	MND	MND	MND	MND	MNR	1,02E-02	2,96E-02	5,97E-06	3,61E-02
Renew. PER as material	MJ	2,04E+02	0,00E+00	-1,35E+01	1,90E+02	MND	MND	MND	MND	MND	MND	MND	MND	MND	MNR	0,00E+00	-1,90E+02	0,00E+00	0,00E+00
Total use of renew. PER	MJ	5,50E+02	4,22E-01	-1,00E+01	5,41E+02	MND	MND	MND	MND	MND	MND	MND	MND	MND	MNR	1,02E-02	-1,90E+02	5,97E-06	3,61E-02
Non-re. PER as energy	MJ	1,35E+02	3,69E+01	3,57E+01	2,07E+02	MND	MND	MND	MND	MND	MND	MND	MND	MND	MNR	8,32E-01	1,09E+00	3,20E-04	-2,67E+01
Non-re. PER as material	MJ	3,43E+01	0,00E+00	-2,56E+00	3,17E+01	MND	MND	MND	MND	MND	MND	MND	MND	MND	MNR	0,00E+00	-3,16E+01	-5,37E-02	0,00E+00
Total use of non-re. PER	MJ	1,69E+02	3,69E+01	3,32E+01	2,39E+02	MND	MND	MND	MND	MND	MND	MND	MND	MND	MNR	8,32E-01	-3,06E+01	-5,34E-02	-2,67E+01
Secondary materials	kg	4,30E-02	1,55E-02	8,01E-03	6,65E-02	MND	MND	MND	MND	MND	MND	MND	MND	MND	MNR	2,78E-04	2,63E-03	1,14E-07	1,58E-01
Renew. secondary fuels	MJ	4,02E-03	1,52E-04	5,38E-04	4,71E-03	MND	MND	MND	MND	MND	MND	MND	MND	MND	MNR	3,40E-06	6,53E-06	4,39E-09	1,01E-04
Non-ren. secondary fuels	MJ	1,47E-02	0,00E+00	0,00E+00	1,47E-02	MND	MND	MND	MND	MND	MND	MND	MND	MND	MNR	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m^3	3,27E-01	3,93E-03	2,30E-02	3,54E-01	MND	MND	MND	MND	MND	MND	MND	MND	MND	MNR	1,05E-04	-1,63E-03	3,43E-07	-5,21E-04

8) PER = Primary energy resources.

廃棄・リサイクル段階 — 廃棄 - END OF LIFE – WASTE

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste	kg	8,78E-01	5,74E-02	1,86E-01	1,12E+00	MND	MND	MND	MND	MND	MND	MND	MND	MND	MNR	1,22E-03	6,17E-04	0,00E+00	-9,04E-02
Non-hazardous waste	kg	1,63E+01	7,82E-01	2,54E+00	1,96E+01	MND	MND	MND	MND	MND	MND	MND	MND	MND	MNR	1,96E-02	7,96E+00	1,30E-03	-7,09E+01
Radioactive waste	kg	3,20E-04	2,47E-04	7,04E-05	6,38E-04	MND	MND	MND	MND	MND	MND	MND	MND	MND	MNR	5,50E-06	9,82E-08	0,00E+00	-6,52E-05

廃棄・リサイクル段階 — 出力フロー - END OF LIFE – OUTPUT FLOWS

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Components for re-use	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MND	MND	MND	MND	MND	MND	MND	MND	MNR	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for recycling	kg	9,83E-04	0,00E+00	0,00E+00	9,83E-04	MND	MND	MND	MND	MND	MND	MND	MND	MND	MNR	0,00E+00	2,26E-01	0,00E+00	0,00E+00
Materials for energy rec	kg	2,69E-03	0,00E+00	7,85E+00	7,85E+00	MND	MND	MND	MND	MND	MND	MND	MND	MND	MNR	0,00E+00	7,94E+00	0,00E+00	0,00E+00
Exported energy	MJ	1,45E-02	0,00E+00	0,00E+00	1,45E-02	MND	MND	MND	MND	MND	MND	MND	MND	MND	MNR	0,00E+00	8,12E+01	0,00E+00	0,00E+00

環境影響 - ENVIRONMENTAL IMPACTS – EN 15804+A1, CML / ISO 21930

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Global Warming Pot.	kg CO_2e	1,09E+01	2,68E+00	2,68E+00	1,63E+01	MND	MND	MND	MND	MND	MND	MND	MND	MND	MNR	5,60E-02	1,58E-01	1,57E-04	-2,03E+00
Ozone depletion Pot.	kg CFC_{-11}e	5,67E-07	4,38E-07	1,19E-07	1,12E-06	MND	MND	MND	MND	MND	MND	MND	MND	MND	MNR	9,92E-09	7,48E-09	3,31E-12	-3,50E-08
Acidification	kg SO_2e	6,43E-02	2,91E-02	1,02E-02	1,04E-01	MND	MND	MND	MND	MND	MND	MND	MND	MND	MNR	2,35E-04	9,38E-04	9,02E-08	-8,61E-03
Eutrophication	kg PO_4^3e	2,56E-02	3,73E-03	3,34E-03	3,27E-02	MND	MND	MND	MND	MND	MND	MND	MND	MND	MNR	5,54E-05	1,11E-03	7,25E-06	-1,80E-03
POCP (“smog”)	kg C_2H_4e	5,78E-03	8,51E-04	4,99E-04	7,13E-03	MND	MND	MND	MND	MND	MND	MND	MND	MND	MNR	7,85E-06	3,41E-05	2,84E-08	-3,63E-04
ADP-elements	kg Sbe	6,17E-05	9,02E-06	4,18E-06	7,49E-05	MND	MND	MND	MND	MND	MND	MND	MND	MND	MNR	1,88E-07	3,77E-07	4,57E-11	-2,36E-06
ADP-fossil	MJ	1,58E+02	3,69E+01	3,64E+01	2,31E+02	MND	MND	MND	MND	MND	MND	MND	MND	MND	MNR	8,32E-01	1,09E+00	3,20E-04	-2,65E+01

検証報告 - VERIFICATION STATEMENT

本 EPD の検証プロセス - 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? Read more online
This EPD has been generated by One Click LCA EPD generator, which has been verified and approved by the EPD Hub.

第三者検証報告 - 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.

HaiHa Nguyen, as an authorized verifier acting for EPD Hub Limited
17.05.2024

VERIFIED ISO 14025