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ENVIRONMENTAL PRODUCT DECLARATION

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

Drainage Channels

Anderton Concrete Products Ltd a trading entity within the Ibstock Plc Group

EPD HUB, HUB-2041
Publishing date 29 September 2024
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Valid until 29 September 2029

EPD Hub
One Click LCA

GENERAL INFORMATION

MANUFACTURER

Manufacturer	Anderton Concrete Products Ltd a trading entity within the Ibstock Plc Group
Address	Leicester Road, Ibstock, Leicestershire, LE67 6HS, UK
Contact details	epds@ibstock.co.uk
Website	https://www.ibstock.co.uk/

EPD STANDARDS, SCOPE AND VERIFICATION

Program operator	EPD Hub, hub@epdhub.com
Reference standard	EN 15804+A2:2019 und ISO 14025
PCR	EPD Hub Core PCR Version 1.1, 5 Dec 2023 EN 16757 Product Category Rules for concrete and concrete elements
Sector	Construction product
Category of EPD	Third party verified EPD
Parent EPD number	NA
Scope of the EPD	Cradle to gate with options, A4-A5, and modules C1-C4, D
EPD author	Jack Topliss
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

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	Anderton - Drainage Channels
Additional labels	See www.ibstock.co.uk/EPD for all products covered by this EPD
Product reference	NA
Place of production	Northwich, United Kingdom
Period for data	01.01.2022 - 31.12.2022
Averaging in EPD	No averaging
Variation in GWP-fossil for A1-A3	- %

ENVIRONMENTAL DATA SUMMARY

Declared unit	1kg
Declared unit mass	1kg
GWP-fossil, A1-A3 ($kgCO_2e$)	1.87E-01
GWP-total, A1-A3 ($kgCO_2e$)	1.31E-01
Secondary material, inputs (%)	0.38
Secondary material, outputs (%)	82.4
Total energy use, A1-A3 (kWh)	0.67
Net freshwater use, A1-A3 (m^3)	0

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Ibstock Plc is a leading UK manufacturer of a diverse range of building products and solutions. The Group concentrates on eight core product categories, each backed up by design and technical services capabilities:

Bricks and Masonry, Facade Systems, Roofing, Flooring and Lintels, Staircase and Lift Shafts, Fencing and Landscaping, Retaining Walls and Rail and Infrastructure.

Ibstock is headquartered in the village of Ibstock, Leicestershire, with 36 active manufacturing sites across the UK.

As a leading building products manufacturer, the Group is committed to the highest levels of corporate responsibility. The ESG 2030 Strategy sets out a clear path to address climate change, improve lives and manufacture materials for life, with an ambitious commitment to reduce carbon emissions by 40% by 2030 and become a net zero operation by 2040.

PRODUCT DESCRIPTION

The Lineworx Perforated Drainage Channels have been extensively used as track drainage within the UK Rail Industry since 2013. This system can, and has been used as Carrier or attenuation drainage at the Crest, 6ft, 10ft or Cess to efficiently remove water from waterlogged areas along an embankment or track.

This easily installed modular drainage system is lightweight and easy to maintain along its entire length without the need for heavy lifting equipment, Road Rail Vehicles (RRVs), cameras or jetting equipment. The system offers the ability to remove or store greater volumes of water over pipe in narrow areas where space is a challenge. This is achieved through the versatility of three different sizes and the ability to gain volume through depth over width.

These products are made at Ibstock's Northwich Factory in Cheshire.

The Life Cycle Assessment for this product has been carried out to represent 1kg of this product. A scaling table will be included in order to convert the results to other formats.

Further information can be found at https://www.ibstock.co.uk/.

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	9	UK
Minerals	88	UK/Europe
Fossil materials	3	Europe
Bio-based materials	0	-

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1kg
Mass per declared unit	1kg
Functional unit	-
Reference service life	-

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	0
Biogenic carbon content in packaging, kg C	0.01518

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							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	X	X	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	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.

This EPD covers a range of products that are manufactured at Ibstock's Northwich factory in Cheshire.

A1: The raw materials used in this factory are sourced from suppliers.

A2: Once raw materials are extracted or produced, they are transported by road to the factory.

A3: Inside the factory, most processes are powered by electricity. The raw materials are mixed together. Water is added to the raw materials and combined together. This mix is transferred to a hopper. Steel reinforcement bars are arranged into a mould and placed onto stirrups to keep their position. The concrete mix is pressed into the mould and is vibrated to remove air pockets and increase the strength of the concrete. The products are sliced with a knife to help demould them, then removed from the moulds so they can be reused. The concrete products are moved onto pallets and covered up to undergo a curing process. Once cured, the finished products are stacked and packaged using wooden pallets and plastic packaging. The products are placed onto the yard ready to be distributed to customers. Any manufacturing waste material is assumed to travel 50km to be processed. Most of this can be crushed into aggregate.

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.

A4: The products are transported from the factories to customers by lorries; assumed to be EURO 5 classification. A weighted average of the journey undertaken by these products to customers and construction sites was calculated to be 142km.

A5: The products are generally laid by hand. Any packaging is removed on the construction site. Sorting and treatment of packaging waste has been included in this section. It is assumed that 44.2% of plastic packaging waste will be recycled. It is assumed that 44.1% of wood packaging waste will be recycled. According to UK Government Data. https://www.gov.uk/government/statistics/uk-waste-data/uk-statistics-on-waste.

It is assumed that 55.8% of plastic packaging waste will be landfilled. It is assumed that 55.9% of wood packaging waste will be landfilled. According to UK Government Data. https://www.gov.uk/government/statistics/uk-waste-data/uk-statistics-on-waste

Material wasted during construction was assumed to be 5% based on industry standard data. The relevant modules were uplifted to accommodate this.

PRODUCT USE AND MAINTENANCE (B1-B7)

B1-7: The Use phase has not been included as the modules are not relevant to this product.

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

PRODUCT END OF LIFE (C1-C4, D)

The end of life of this product accounts for the energy consumed to extract the waste products and the treatment of the waste products afterwards.

C1: Energy consumption in the demolition process comes in the form of diesel used by machinery. This is taken as 0.01kWh per 1kg of material, according to (O. Bozdag and M. Secer, “Energy Consumption of RC Buildings during Their Life Cycle, Sustainable Construction, Materials and Practices: Challenge of the Industry for the New Millennium, Minho, 12-14 September 2007, pp. 480-487.)

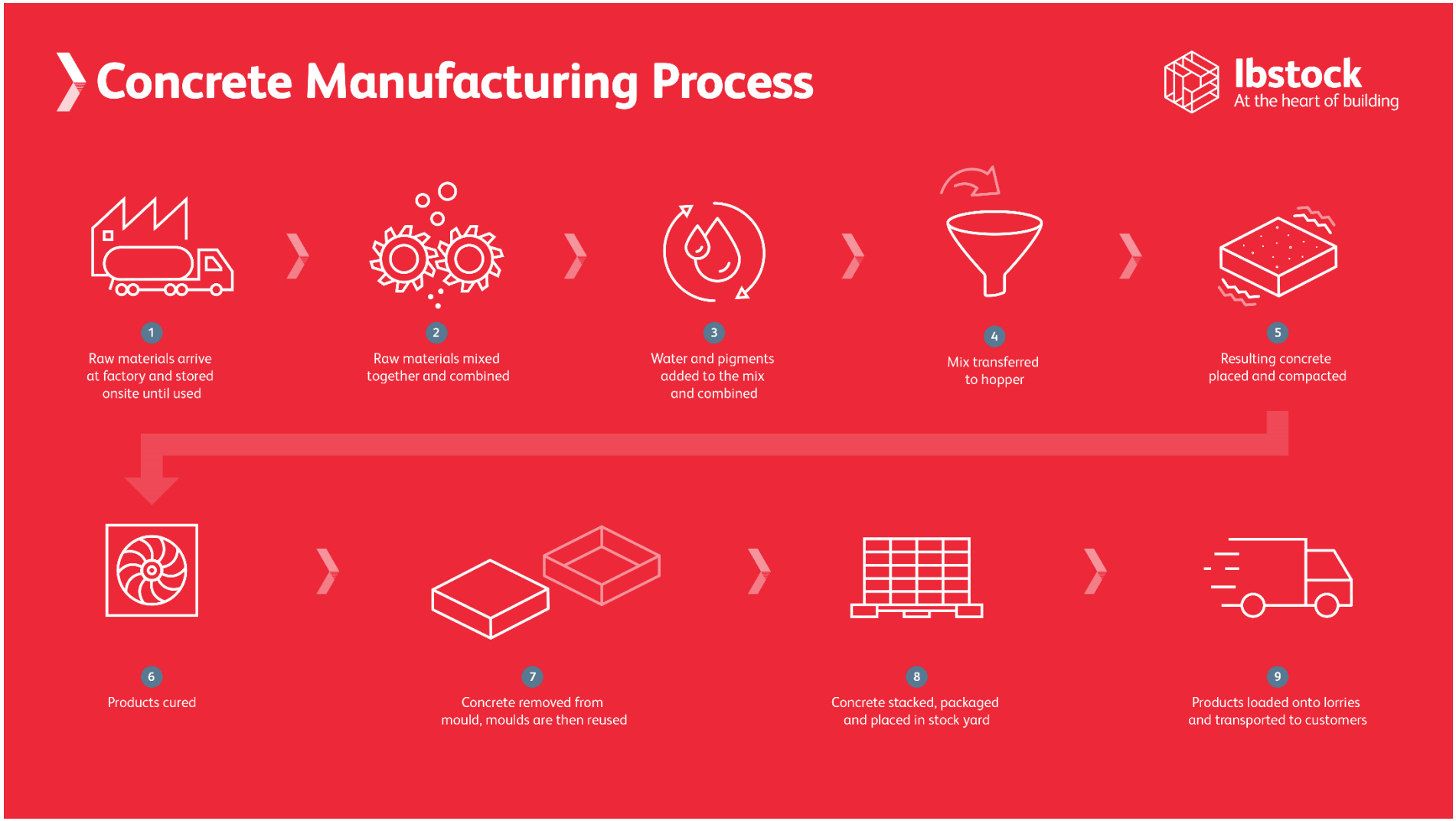
C2: It is assumed that any waste material travels 50km by road to be processed.

C3: It is assumed that 92.6% of trough waste will be recycled. According to UK Government Data. https://www.gov.uk/government/statistics/uk-waste-data/uk-statistics-on-waste. Any steel has been removed from this figure and assumed not to be recycled, as 97% recycled content steel is used. This avoids double counting this for recycling to be conservative.

C4: It is assumed that 7.4% of trough waste will be landfilled. According to UK Government Data. https://www.gov.uk/government/statistics/uk-waste-data/uk-statistics-on-waste

D: The waste packaging recycled will be re-used to make new packaging products, avoiding the use of virgin raw materials for these products. The waste trough recycled will be re-used to make gravel aggregate on building sites, avoiding the use of virgin raw materials.

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.

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	Allocated by mass or volume
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 v3.8, Plastics Europe, Federal LCA Commons and One Click LCA databases as sources of environmental data.

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	C3	C4	D
GWP – total[1)]	kg CO_2e	1.56E-01	1.67E-02	-4.17E-02	1.31E-01	1.39E-02	6.70E-02	MND	MND	MND	MND	MND	MND	MND	3.31E-03	4.69E-03	6.79E-03	9.28E-04	-6.24E-03
GWP – fossil	kg CO_2e	1.56E-01	1.67E-02	1.38E-02	1.87E-01	1.38E-02	1.14E-02	MND	MND	MND	MND	MND	MND	MND	3.31E-03	4.69E-03	6.79E-03	9.27E-04	-6.22E-03
GWP – biogenic	kg CO_2e	0.00E+00	0.00E+00	-5.56E-02	-5.56E-02	0.00E+00	5.56E-02	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
GWP – LULUC	kg CO_2e	7.78E-05	1.07E-05	5.17E-05	1.40E-04	5.11E-06	8.38E-06	MND	MND	MND	MND	MND	MND	MND	3.30E-07	1.73E-06	5.32E-06	8.75E-07	-2.00E-05
Ozone depletion pot.	kg $CFC\text{-}_{11}e$	6.58E-09	3.56E-09	8.06E-09	1.82E-08	3.19E-09	1.35E-09	MND	MND	MND	MND	MND	MND	MND	7.07E-10	1.08E-09	1.39E-09	3.75E-10	-7.83E-10
Acidification potential	mol H^+e	5.14E-04	2.83E-04	9.25E-05	8.89E-04	5.86E-05	5.61E-05	MND	MND	MND	MND	MND	MND	MND	3.44E-05	1.99E-05	5.74E-05	8.71E-06	-4.24E-05
EP-freshwater[2)]	kg Pe	1.10E-05	1.02E-07	7.03E-07	1.18E-05	1.13E-07	6.30E-07	MND	MND	MND	MND	MND	MND	MND	1.10E-08	3.84E-08	1.78E-07	9.71E-09	-3.35E-07
EP-marine	kg Ne	7.12E-05	6.62E-05	2.39E-05	1.61E-04	1.74E-05	1.24E-05	MND	MND	MND	MND	MND	MND	MND	1.52E-05	5.90E-06	2.14E-05	3.02E-06	-1.23E-05
EP-terrestrial	mol Ne	1.39E-03	7.37E-04	2.60E-04	2.39E-03	1.92E-04	1.61E-04	MND	MND	MND	MND	MND	MND	MND	1.67E-04	6.51E-05	2.35E-04	3.32E-05	-1.39E-04
POCP ("smog")[3)]	kg NMVOCe	4.51E-04	2.01E-04	9.58E-05	7.47E-04	6.15E-05	5.01E-05	MND	MND	MND	MND	MND	MND	MND	4.59E-05	2.08E-05	6.55E-05	9.65E-06	-4.61E-05
ADP-minerals & metals4)	kg Sbe	6.59E-07	3.35E-08	1.11E-07	8.04E-07	3.25E-08	4.57E-08	MND	MND	MND	MND	MND	MND	MND	1.68E-09	1.10E-08	2.25E-08	2.13E-09	-6.02E-08
ADP-fossil resources	MJ	1.13E+00	2.30E-01	3.65E-01	1.73E+00	2.08E-01	1.20E-01	MND	MND	MND	MND	MND	MND	MND	4.45E-02	7.05E-02	1.17E-01	2.54E-02	-9.58E-02
Water use[5)]	m^3e depr.	5.39E-02	9.15E-04	8.95E-03	6.38E-02	9.31E-04	3.46E-03	MND	MND	MND	MND	MND	MND	MND	1.20E-04	3.15E-04	1.11E-03	8.06E-05	-3.86E-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.

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	4.49E-09	1.21E-09	1.32E-09	7.02E-09	1.60E-09	1.04E-09	MND	MND	MND	MND	MND	MND	MND	9.22E-10	5.41E-10	7.35E-09	1.76E-10	-7.38E-10
Ionizing radiation[6]	kBq U235e	3.04E-03	1.08E-03	2.10E-03	6.22E-03	9.90E-04	5.78E-04	MND	MND	MND	MND	MND	MND	MND	2.05E-04	3.36E-04	1.15E-03	1.15E-04	-6.11E-04
Ecotoxicity (freshwater)	CTUe	1.82E+00	1.81E-01	3.52E-01	2.35E+00	1.87E-01	1.46E-01	MND	MND	MND	MND	MND	MND	MND	2.68E-02	6.34E-02	8.24E-02	1.66E-02	-1.47E-01
Human toxicity, cancer	CTUh	2.41E-10	8.69E-12	7.00E-11	3.20E-10	4.60E-12	1.69E-11	MND	MND	MND	MND	MND	MND	MND	1.03E-12	1.56E-12	3.62E-12	4.14E-13	-3.13E-11
Human tox. non-cancer	CTUh	1.62E-09	1.56E-10	2.87E-10	2.06E-09	1.85E-10	1.31E-10	MND	MND	MND	MND	MND	MND	MND	1.94E-11	6.27E-11	6.93E-11	1.08E-11	-1.43E-10
SQP[7]	-	2.03E-01	1.57E-01	4.54E+00	4.90E+00	2.40E-01	2.87E-01	MND	MND	MND	MND	MND	MND	MND	5.79E-03	8.12E-02	1.20E-01	5.43E-02	-2.01E+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.

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	1.48E-01	2.23E-03	3.84E-01	5.34E-01	2.34E-03	2.80E-02	MND	MND	MND	MND	MND	MND	MND	2.54E-04	7.94E-04	6.41E-03	2.21E-04	-1.48E-01
Renew. PER as material	MJ	0.00E+00	0.00E+00	4.87E-01	4.87E-01	0.00E+00	-4.87E-01	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of renew. PER	MJ	1.48E-01	2.23E-03	8.71E-01	1.02E+00	2.34E-03	-4.59E-01	MND	MND	MND	MND	MND	MND	MND	2.54E-04	7.94E-04	6.41E-03	2.21E-04	-1.48E-01
Non-re. PER as energy	MJ	1.23E+00	2.30E-01	2.08E-01	1.67E+00	2.08E-01	1.17E-01	MND	MND	MND	MND	MND	MND	MND	4.45E-02	7.05E-02	1.17E-01	2.54E-02	-8.16E-02
Non-re. PER as material	MJ	0.00E+00	0.00E+00	3.68E-02	3.68E-02	0.00E+00	-3.68E-02	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of non-re. PER	MJ	1.23E+00	2.30E-01	2.45E-01	1.70E+00	2.08E-01	8.04E-02	MND	MND	MND	MND	MND	MND	MND	4.45E-02	7.05E-02	1.17E-01	2.54E-02	-8.16E-02
Secondary materials	kg	3.82E-03	9.37E-05	1.84E-03	5.75E-03	5.77E-05	2.99E-04	MND	MND	MND	MND	MND	MND	MND	1.74E-05	1.96E-05	4.21E-05	5.34E-06	-8.33E-04
Renew. secondary fuels	MJ	4.01E-02	4.95E-07	1.64E-02	5.65E-02	5.83E-07	2.83E-03	MND	MND	MND	MND	MND	MND	MND	5.70E-08	1.97E-07	6.12E-07	1.40E-07	-7.26E-03
Non-ren. secondary fuels	MJ	1.38E-01	0.00E+00	0.00E+00	1.38E-01	0.00E+00	6.90E-03	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of net fresh water	m^3	1.67E-03	2.37E-05	2.28E-04	1.92E-03	2.69E-05	1.11E-04	MND	MND	MND	MND	MND	MND	MND	2.70E-06	9.13E-06	6.50E-05	2.78E-05	-1.24E-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	C3	C4	D
Hazardous waste	kg	1.42E-02	3.35E-04	8.88E-04	1.55E-02	2.76E-04	8.26E-04	MND	MND	MND	MND	MND	MND	MND	5.96E-05	9.34E-05	2.54E-04	0.00E+00	-5.02E-04
Non-hazardous waste	kg	2.32E-01	4.06E-03	1.38E-01	3.74E-01	4.53E-03	5.22E-02	MND	MND	MND	MND	MND	MND	MND	4.19E-04	1.54E-03	1.51E-01	1.76E-01	-8.75E-03
Radioactive waste	kg	2.29E-06	1.57E-06	1.79E-06	5.66E-06	1.39E-06	4.75E-07	MND	MND	MND	MND	MND	MND	MND	3.13E-07	4.71E-07	7.88E-07	0.00E+00	-3.42E-07

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	0.00E+00	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	1.37E-04	0.00E+00	0.00E+00	1.37E-04	0.00E+00	1.72E-02	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	8.24E-01	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	MND	MND	MND	MND	MND	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	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

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	1.70E-01	1.59E-02	1.35E-02	1.99E-01	1.37E-02	1.34E-02	MND	MND	MND	MND	MND	MND	MND	3.27E-03	4.64E-03	6.70E-03	9.08E-04	-6.05E-03
Ozone depletion Pot.	kg $CFC_{-11}e$	5.04E-09	2.70E-09	5.98E-09	1.37E-08	2.52E-09	1.03E-09	MND	MND	MND	MND	MND	MND	MND	5.60E-10	8.55E-10	1.10E-09	2.97E-10	-6.51E-10
Acidification	kg SO_2e	5.01E-04	2.25E-04	7.29E-05	7.99E-04	4.56E-05	4.89E-05	MND	MND	MND	MND	MND	MND	MND	2.45E-05	1.54E-05	4.27E-05	6.58E-06	-3.25E-05
Eutrophication	kg PO_4^3e	1.53E-04	2.64E-05	2.98E-05	2.09E-04	1.04E-05	7.61E-05	MND	MND	MND	MND	MND	MND	MND	5.69E-06	3.52E-06	1.41E-05	1.42E-06	-1.43E-05
POCP (“smog”)	kg C_2H_4e	4.96E-05	6.48E-06	6.92E-06	6.30E-05	1.78E-06	3.78E-06	MND	MND	MND	MND	MND	MND	MND	5.36E-07	6.03E-07	1.30E-06	2.76E-07	-3.47E-06
ADP-elements	kg Sbe	6.41E-07	3.13E-08	1.09E-07	7.81E-07	3.14E-08	4.45E-08	MND	MND	MND	MND	MND	MND	MND	1.65E-09	1.07E-08	2.22E-08	2.10E-09	-5.95E-08
ADP-fossil	MJ	1.30E+00	2.20E-01	3.65E-01	1.88E+00	2.08E-01	1.28E-01	MND	MND	MND	MND	MND	MND	MND	4.45E-02	7.05E-02	1.17E-01	2.54E-02	-9.58E-02

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? Read more online
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

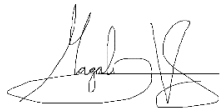
I hereby confirm that, following detailed examination, I have not established any relevant deviations by the studied Environmental Product Declaration (EPD), its LCA and project report, in terms of the data collected and used in the LCA calculations, the way the LCA-based calculations have been carried 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
29.09.2024



APPENDIX 1

CONVERSION TABLE (DRA750B)

The figures in the Environmental Impact Data are given per kg of drainage channel produced. A conversion table has been provided below to scale any Environmental Impact Data figures into different metrics. Multiplication factors are based on a drainage channel weight of 51kg

Metric	Multiplication Factor
Per unit	*51

The A1-A3 Global Warming Potential – Fossil has been scaled accordingly in the table below.

Metric	GWP Fossil – A1-A3
kgCO2/unit	10.1

The Total Global Warming Potential – Fossil has been scaled accordingly in the table below.

Metric	GWP Fossil – Total
kgCO2/unit	12.2

CONVERSION TABLE (DRA750R)

The figures in the Environmental Impact Data are given per kg of drainage channel produced. A conversion table has been provided below to scale any Environmental Impact Data figures into different metrics. Multiplication factors are based on a drainage channel weight of 31kg

Metric	Multiplication Factor
Per unit	*31

The A1-A3 Global Warming Potential – Fossil has been scaled accordingly in the table below.

Metric	GWP Fossil – A1-A3
kgCO2/unit	6.2

The Total Global Warming Potential – Fossil has been scaled accordingly in the table below.

Metric	GWP Fossil – Total
kgCO2/unit	7.4

CONVERSION TABLE (DRA750L)

The figures in the Environmental Impact Data are given per kg of drainage channel produced. A conversion table has been provided below to scale any Environmental Impact Data figures into different metrics. Multiplication factors are based on a drainage channel weight of 24kg

Metric	Multiplication Factor
Per unit	*24

The A1-A3 Global Warming Potential – Fossil has been scaled accordingly in the table below.

Metric	GWP Fossil – A1-A3
kgCO2/unit	4.8

The Total Global Warming Potential – Fossil has been scaled accordingly in the table below.

Metric	GWP Fossil – Total
kgCO2/unit	5.8

CONVERSION TABLE (DRA750B30)

The figures in the Environmental Impact Data are given per kg of drainage channel produced. A conversion table has been provided below to scale any Environmental Impact Data figures into different metrics. Multiplication factors are based on a drainage channel weight of 53kg

Metric	Multiplication Factor
Per unit	*53

The A1-A3 Global Warming Potential – Fossil has been scaled accordingly in the table below.

Metric	GWP Fossil – A1-A3
kgCO2/unit	10.5

The Total Global Warming Potential – Fossil has been scaled accordingly in the table below.

Metric	GWP Fossil – Total
kgCO2/unit	12.7

CONVERSION TABLE (DRA750R30)

The figures in the Environmental Impact Data are given per kg of drainage channel produced. A conversion table has been provided below to scale any Environmental Impact Data figures into different metrics. Multiplication factors are based on a drainage channel weight of 34kg

Metric	Multiplication Factor
Per unit	*34

The A1-A3 Global Warming Potential – Fossil has been scaled accordingly in the table below.

Metric	GWP Fossil – A1-A3
kgCO2/unit	6.8

The Total Global Warming Potential – Fossil has been scaled accordingly in the table below.

Metric	GWP Fossil – Total
kgCO2/unit	8.2

CONVERSION TABLE (DRA750L30)

The figures in the Environmental Impact Data are given per kg of drainage channel produced. A conversion table has been provided below to scale any Environmental Impact Data figures into different metrics. Multiplication factors are based on a drainage channel weight of 40kg

Metric	Multiplication Factor
Per unit	*40

The A1-A3 Global Warming Potential – Fossil has been scaled accordingly in the table below.

Metric	GWP Fossil – A1-A3
kgCO2/unit	8.0

The Total Global Warming Potential – Fossil has been scaled accordingly in the table below.

Metric	GWP Fossil – Total
kgCO2/unit	9.6