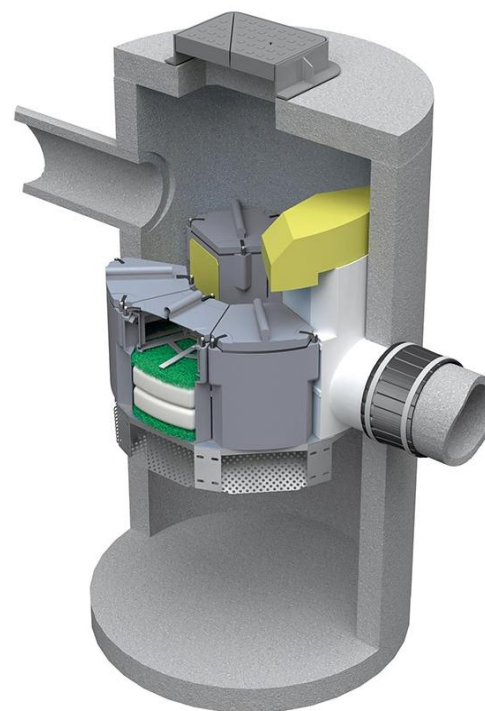




ENVIRONMENTAL PRODUCT DECLARATION

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

Up-Flo™ Filter
Hydro International



EPD HUB, HUB-5905

Published on 01.04.2026, last updated on 01.04.2026, valid until 01.04.2031

Life Cycle Assessment study has been performed in accordance with the requirements of EN 15804, EPD Hub PCR version 1.2 (24 Mar 2025) and JRC characterization factors EF 3.1.



Created with One Click LCA



GENERAL INFORMATION

MANUFACTURER

Manufacturer	Hydro International
Address	Unit 2, Rivermead Court, Kenn Business Park, Windmill Road, Kenn, Clevedon, BS21 6FT, Clevedon, UK
Contact details	enquiries@hydro-int.com
Website	hydro-int.com

EPD STANDARDS, SCOPE AND VERIFICATION

Program operator	EPD Hub, hub@epdhub.com
Reference standard	EN15804+A2:2019 and ISO 14025
PCR	EPD Hub Core PCR Version 1.2, 24 Mar 2025
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	Harvey Farrington-Thorne, Hydro International
EPD verification	Independent verification of this EPD and data, according to ISO 14025: o Internal verification p External verification
EPD verifier	Imane Uald Lamkaddam as an authorized verifier for EPD Hub

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	Up-Flo™ Filter
Additional labels	-
Product reference	UFF
Place(s) of raw material origin	UK, Europe, USA
Place of production	Frome and Eastington, UK
Place(s) of installation and use	United Kingdom
Period for data	2025
Averaging in EPD	No grouping
Variation in GWP-fossil for A1-A3 (%)	0
GTIN (Global Trade Item Number)	-
NOBB (Norwegian Building Product Database)	-
A1-A3 Specific data (%)	82.1

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 unit of Up-Flo Filter
Declared unit mass	4240.25 kg
Mass of packaging	8.64 kg
GWP-fossil, A1-A3 (kgCO₂e)	1940
GWP-total, A1-A3 (kgCO₂e)	1900
Secondary material, inputs (%)	0.92
Secondary material, outputs (%)	68.3
Total energy use, A1-A3 (kWh)	6230
Net freshwater use, A1-A3 (m³)	20.1

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Hydro International Ltd, a CRH company, provides advanced products, services and expertise to help municipal, industrial and construction customers to improve their water management processes, increase operational performance and reduce environmental impact.

With over 40 years of experience and a reputation for engineering excellence, businesses and public organisations all over the world rely on Hydro International products and services to reduce flood risk, improve water treatment and protect the environment from water pollution.

Headquartered in Clevedon, UK, Hydro International has a network of over 80 distribution partners and serves customers in more than 40 countries.

PRODUCT DESCRIPTION

The Up-Flo™ Filter is a compact, high-performance stormwater treatment device that integrates multiple treatment processes within a single unit. Using a combination of screening and fluidised up-flow filtration, it removes a wide range of pollutants commonly found in surface water runoff.

The system treats runoff from roads, car parks, industrial areas and other impermeable surfaces, and can be used as a stand-alone device or within wider SuDS, WSUD, LID or LEED treatment trains. It is suitable for both new installations and retrofit applications.

The Up-Flo™ Filter effectively captures fine sediments, nutrients, heavy metals, hydrocarbons (including PAHs), and gross pollutants such as litter and organic debris. A range of chamber sizes and module configurations are available to accommodate different flow rates and site requirements.

Further information can be found at: <https://hydro-int.com/en>.

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	0.94	EU/Global
Minerals	97.49	UK
Fossil materials	1.57	EU/Global
Bio-based materials	-	-

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	1.57

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 unit of Up-Flo Filter
Mass per declared unit	4240.25 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							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	ND	x	ND	ND	ND	ND	ND	ND	ND	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

Not declared = ND.

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.

A market-based approach is used in modelling the electricity mix utilised in the factory.

Each Up-Flo® Filter is manufactured from concrete, HDPE, stainless steel, and a proprietary blend of granular filtration media. The primary production processes include concrete casting, HDPE rotor moulding and trimming, cutting and welding of steel supports. The internal components are then secured into a pre-cast concrete chamber, after being safely transported and packaged using cardboard and a pallet. They are then transported to site.

TRANSPORT AND INSTALLATION (A4-A5)

Transportation impacts that occurred from final product delivery to the construction site (A4) are not considered. The installation (A5) on site scenario assumes a conservative estimate for the impacts of moving the unit on site. As the product is bespoke the installation losses are negligible.

PRODUCT USE AND MAINTENANCE (B1-B7)

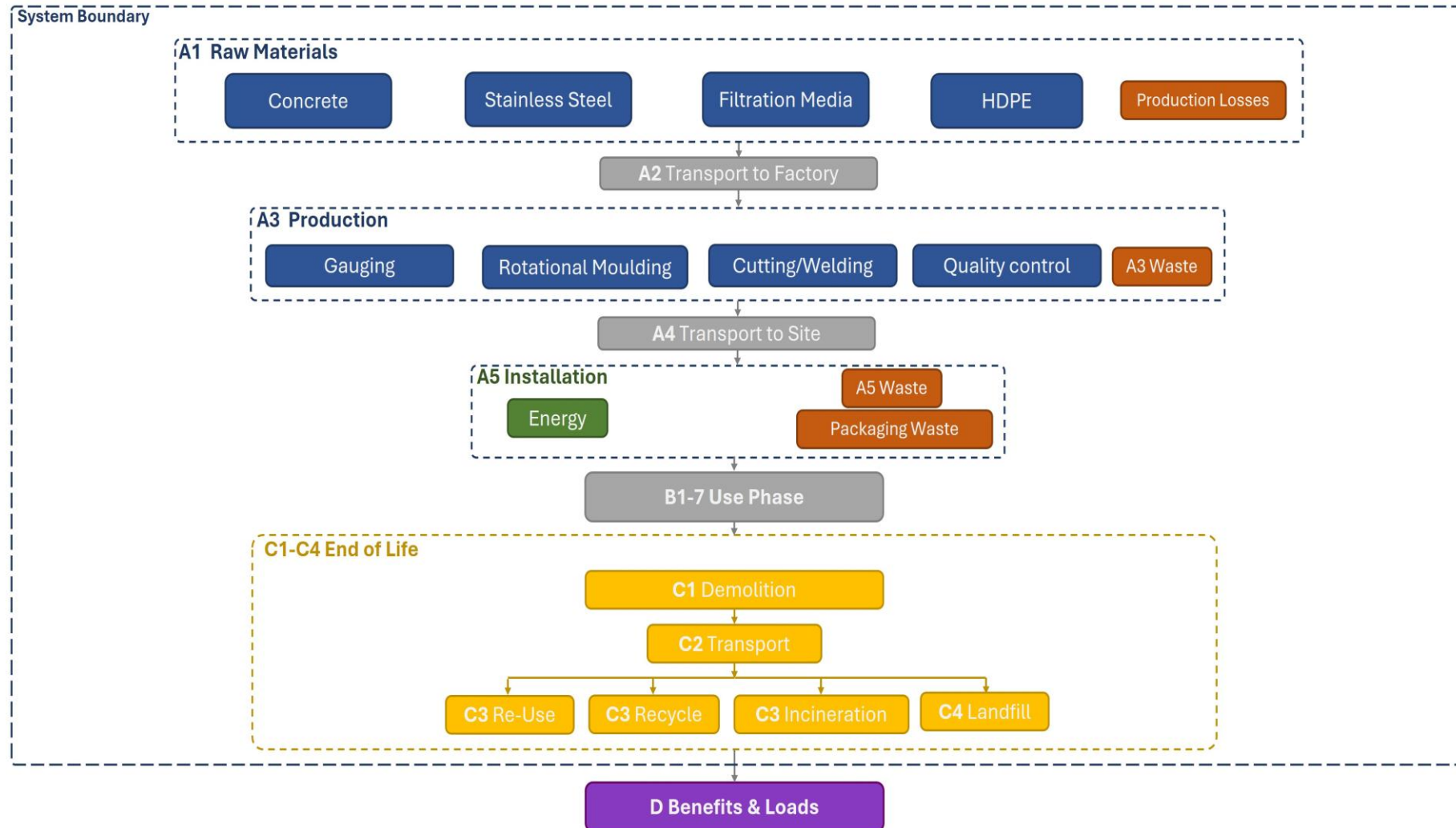
The product is not considered to generate any environmental impacts during the use phase, so these modules are not included. Air, soil, and water impacts during the use phase have not been studied.

PRODUCT END OF LIFE (C1-C4, D)

For the removal of the Up-Flo® Filter from the site, a conservative estimate for the impacts of moving the unit on site is assumed. A deconstruction energy assumption of 0.01 kWh per kilogram of product has been applied, based on average values reported by Bozdağ & Seçer (2007). In the absence of project-specific data, a standard transport distance of 50 km to the waste treatment facility has been assumed, following common practice in EN 15804-compliant construction product EPDs and permitted by EPD programme

instructions for scenario assumptions. End-of-life treatment scenarios for the main material components are based on recognised industry sources. For stainless steel, a recycling rate of 95% and a landfill rate of 5% are applied in accordance with World Stainless (2024) and ICDA (2023). Concrete end-of-life is modelled using 70% recycling and 30% landfill, reflecting the guidance from the UK Ready Mixed Concrete Technical Report (2018). For HDPE, end-of-life treatment follows Plastics Europe (2020), assuming 49% incineration with energy recovery, 24% recycling, and 27% landfill. Module D credits are calculated using the same reference sources, reflecting the potential benefits from material recycling and energy recovery where applicable.

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.

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.

Certain raw materials and associated processes are removed as their masses are much less than 1% of the total mass of the product.

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/AC:2021 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	No allocation
Manufacturing energy and waste	No allocation

PRODUCT & MANUFACTURING SITES GROUPING

Type of grouping	No grouping
Grouping method	Not applicable
Variation in GWP-fossil for A1-A3, %	0

LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator for EPD Hub V3 and EPD Process Certification v3.2.4. The LCA and EPD have been prepared according to the reference standards and ISO 14040/14044. The EPD Generator uses Ecoinvent v3.10.1/3.11/3.12 and One Click LCA databases as sources of environmental data. Allocation used in Ecoinvent 3.10.1/3.11/3.12 environmental data sources follow the methodology 'allocation, Cut-off, EN 15804+A2'.

- 1) EN 15804:2012+A2:2019 - Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products**
- 2) EPD Hub Product Category Rules (PCR) Version 1.2 - Published 24 March 2025**
- 3) EPD Hub General Program Instructions (GPI) Version 1.3 - Published 24 March 2025**
- 4) ISO 14040:2006 - Environmental management - Life cycle assessment - Principles and framework**
- 5) ISO 14044:2006 - Environmental management - Life cycle assessment - Requirements and guidelines**
- 6) ISO 14025:2006 - Environmental labels and declarations - Type III environmental declarations - Principles and procedures**

ENVIRONMENTAL IMPACT DATA

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

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, EF 3.1

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 ₂ e	9.03E+02	9.06E+02	9.55E+01	1.90E+03	ND	1.55E+00	ND	ND	ND	ND	ND	ND	ND	1.54E+01	2.34E+01	5.44E+01	5.77E+01	-1.83E+02
GWP – fossil	kg CO ₂ e	9.41E+02	9.05E+02	9.47E+01	1.94E+03	ND	1.55E+00	ND	ND	ND	ND	ND	ND	ND	1.54E+01	2.34E+01	5.43E+01	9.84E+00	-1.82E+02
GWP – biogenic	kg CO ₂ e	-3.83E+01	1.32E-01	6.21E-01	-3.76E+01	ND	1.58E-04	ND	ND	ND	ND	ND	ND	ND	2.93E-03	5.29E-03	1.65E-01	4.78E+01	0.00E+00
GWP – LULUC	kg CO ₂ e	3.81E-01	7.47E-02	1.82E-01	6.38E-01	ND	1.59E-04	ND	ND	ND	ND	ND	ND	ND	1.58E-03	1.05E-02	4.03E-03	4.71E-03	-1.90E-01
Ozone depletion pot.	kg CFC-11e	3.18E-05	1.39E-05	3.23E-06	4.90E-05	ND	2.37E-08	ND	ND	ND	ND	ND	ND	ND	2.28E-07	3.45E-07	3.27E-08	2.53E-07	-2.18E-06
Acidification potential	mol H ⁺ e	3.36E+00	3.72E+00	2.79E-01	7.37E+00	ND	1.40E-02	ND	ND	ND	ND	ND	ND	ND	1.38E-01	7.97E-02	2.29E-02	6.68E-02	-1.03E+00
EP-freshwater ²⁾	kg Pe	9.02E-02	1.42E-02	2.74E-02	1.32E-01	ND	4.47E-05	ND	ND	ND	ND	ND	ND	ND	4.95E-04	1.82E-03	1.43E-03	2.62E-03	-1.49E-01
EP-marine	kg Ne	8.25E-01	1.53E+00	6.56E-02	2.42E+00	ND	6.49E-03	ND	ND	ND	ND	ND	ND	ND	6.40E-02	2.62E-02	7.91E-03	2.60E-02	-1.94E-01
EP-terrestrial	mol Ne	9.29E+00	1.67E+01	6.24E-01	2.66E+01	ND	7.11E-02	ND	ND	ND	ND	ND	ND	ND	7.01E-01	2.85E-01	7.38E-02	2.61E-01	-2.08E+00
POCP (“smog”) ³⁾	kg NMVOCe	3.04E+00	5.44E+00	2.39E-01	8.72E+00	ND	2.12E-02	ND	ND	ND	ND	ND	ND	ND	2.10E-01	1.17E-01	2.05E-02	9.44E-02	-7.10E-01
ADP-minerals & metals ⁴⁾	kg Sbe	7.87E-03	2.41E-04	2.44E-04	8.35E-03	ND	5.56E-07	ND	ND	ND	ND	ND	ND	ND	5.54E-06	6.52E-05	6.84E-05	1.35E-05	-3.81E-03
ADP-fossil resources	MJ	8.45E+03	1.20E+04	1.90E+03	2.23E+04	ND	2.03E+01	ND	ND	ND	ND	ND	ND	ND	2.00E+02	3.39E+02	3.67E+01	2.15E+02	-2.58E+03
Water use ⁵⁾	m ³ e depr.	1.89E+02	1.69E+01	3.53E+01	2.41E+02	ND	5.07E-02	ND	ND	ND	ND	ND	ND	ND	5.16E-01	1.67E+00	2.00E+00	9.55E+00	-1.05E+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, EF 3.1

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	2.10E-05	9.44E-06	2.00E-06	3.24E-05	ND	3.98E-07	ND	ND	ND	ND	ND	ND	ND	3.93E-06	2.34E-06	4.63E-07	1.44E-06	-1.41E-05
Ionizing radiation ⁶⁾	kBq U235e	1.43E+01	3.37E+00	4.13E+01	5.90E+01	ND	8.98E-03	ND	ND	ND	ND	ND	ND	ND	8.53E-02	2.95E-01	5.64E-01	1.47E-01	-1.56E+01
Ecotoxicity (freshwater)	CTUe	1.80E+03	1.96E+03	1.61E+03	5.38E+03	ND	1.12E+00	ND	ND	ND	ND	ND	ND	ND	1.14E+02	4.80E+01	2.25E+02	1.56E+03	-8.57E+03
Human toxicity, cancer	CTUh	2.56E-07	5.70E-08	2.16E-08	3.35E-07	ND	1.59E-10	ND	ND	ND	ND	ND	ND	ND	1.57E-09	3.86E-09	4.57E-09	1.87E-09	-1.25E-07
Human tox. non-cancer	CTUh	4.36E-06	9.21E-06	4.97E-07	1.41E-05	ND	2.52E-09	ND	ND	ND	ND	ND	ND	ND	2.47E-08	2.20E-07	1.53E-07	6.54E-08	-2.95E-06
SQP ⁷⁾	-	7.43E+03	8.76E+02	1.04E+03	9.35E+03	ND	1.42E+00	ND	ND	ND	ND	ND	ND	ND	1.33E+01	3.41E+02	3.37E+01	4.38E+02	-1.10E+03

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	1.88E+03	4.51E+01	2.96E+02	2.22E+03	ND	1.28E-01	ND	ND	ND	ND	ND	ND	ND	1.26E+00	4.65E+00	6.24E+00	2.29E+00	-4.66E+02
Renew. PER as material	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	0.00E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of renew. PER	MJ	1.88E+03	4.51E+01	2.96E+02	2.22E+03	ND	1.28E-01	ND	ND	ND	ND	ND	ND	ND	1.26E+00	4.65E+00	6.24E+00	2.29E+00	-4.66E+02
Non-re. PER as energy	MJ	6.69E+03	1.20E+04	1.52E+03	2.02E+04	ND	2.03E+01	ND	ND	ND	ND	ND	ND	ND	2.00E+02	3.39E+02	-9.69E+02	-1.46E+02	-2.58E+03
Non-re. PER as material	MJ	1.70E+03	0.00E+00	-2.84E+02	1.42E+03	ND	0.00E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	-1.04E+03	-3.83E+02	3.49E+02
Total use of non-re. PER	MJ	8.39E+03	1.20E+04	1.24E+03	2.16E+04	ND	2.03E+01	ND	ND	ND	ND	ND	ND	ND	2.00E+02	3.39E+02	-2.00E+03	-5.29E+02	-2.24E+03
Secondary materials	kg	3.90E+01	1.11E+00	1.94E+00	4.21E+01	ND	8.42E-03	ND	ND	ND	ND	ND	ND	ND	8.29E-02	1.44E-01	5.72E-02	5.57E-02	2.27E+01
Renew. secondary fuels	MJ	4.44E+01	6.44E-03	1.58E+00	4.60E+01	ND	2.20E-05	ND	ND	ND	ND	ND	ND	ND	2.17E-04	1.83E-03	9.29E-04	1.15E-03	-3.77E-02
Non-ren. secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	0.00E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of net fresh water	m ³	1.88E+01	5.12E-01	8.01E-01	2.01E+01	ND	1.34E-03	ND	ND	ND	ND	ND	ND	ND	1.28E-02	5.01E-02	2.67E-02	-1.61E-01	-2.40E+00

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	1.89E+02	1.07E+01	3.54E+00	2.03E+02	ND	2.26E-02	ND	ND	ND	ND	ND	ND	ND	2.25E-01	5.74E-01	6.19E-01	2.58E-01	-1.26E+02
Non-hazardous waste	kg	1.13E+03	1.10E+02	1.80E+02	1.42E+03	ND	3.08E-01	ND	ND	ND	ND	ND	ND	ND	3.27E+00	1.06E+01	2.57E+01	4.06E+02	-9.66E+02
Radioactive waste	kg	1.87E-02	7.80E-04	9.58E-03	2.91E-02	ND	2.20E-06	ND	ND	ND	ND	ND	ND	ND	2.10E-05	7.23E-05	1.44E-04	3.58E-05	-3.95E-03

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	ND	0.00E+00	ND	ND	ND	ND	ND	ND	ND	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	1.20E+01	1.20E+01	ND	0.00E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	2.88E+03	0.00E+00	0.00E+00
Materials for energy rec	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	0.00E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	1.68E+01	0.00E+00	0.00E+00
Exported energy	MJ	0.00E+00	0.00E+00	6.50E+01	6.50E+01	ND	0.00E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	2.71E+02	0.00E+00	0.00E+00
Exported energy – Electricity	MJ	0.00E+00	0.00E+00	2.73E+01	2.73E+01	ND	0.00E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	1.14E+02	0.00E+00	0.00E+00
Exported energy –	MJ	0.00E+00	0.00E+00	3.76E+01	3.76E+01	ND	0.00E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	1.57E+02	0.00E+00	0.00E+00

ENVIRONMENTAL IMPACTS – EN 15804+A1, CML

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 ₂ e	9.66E+02	9.01E+02	9.52E+01	1.96E+03	ND	1.54E+00	ND	ND	ND	ND	ND	ND	ND	1.53E+01	2.32E+01	5.44E+01	9.71E+00	-1.81E+02
Ozone depletion Pot.	kg CFC-11e	2.67E-05	1.11E-05	2.87E-06	4.06E-05	ND	1.88E-08	ND	ND	ND	ND	ND	ND	ND	1.82E-07	2.75E-07	2.76E-08	2.01E-07	-1.81E-06
Acidification	kg SO ₂ e	2.56E+00	2.71E+00	2.26E-01	5.50E+00	ND	9.84E-03	ND	ND	ND	ND	ND	ND	ND	9.67E-02	6.08E-02	1.78E-02	5.01E-02	-8.50E-01
Eutrophication	kg PO ₄ ³ e	2.24E+00	5.68E-01	2.07E-01	3.02E+00	ND	2.30E-03	ND	ND	ND	ND	ND	ND	ND	2.28E-02	1.48E-02	3.88E-03	1.62E-02	-1.68E-01
POCP (“smog”)	kg C ₂ H ₄ e	4.03E-01	2.07E-01	2.19E-02	6.32E-01	ND	7.37E-04	ND	ND	ND	ND	ND	ND	ND	7.26E-03	5.42E-03	1.32E-03	4.61E-03	-5.79E-02
ADP-elements	kg Sbe	7.82E-03	2.32E-04	2.37E-04	8.29E-03	ND	5.40E-07	ND	ND	ND	ND	ND	ND	ND	5.37E-06	6.36E-05	6.78E-05	1.32E-05	-3.79E-03
ADP-fossil	MJ	8.16E+03	1.19E+04	1.28E+03	2.14E+04	ND	2.01E+01	ND	ND	ND	ND	ND	ND	ND	1.99E+02	3.34E+02	2.68E+01	2.13E+02	-2.33E+03

ADDITIONAL INDICATOR – GWP-GHG

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG ⁹⁾	kg CO ₂ e	9.41E+02	9.06E+02	9.49E+01	1.94E+03	ND	1.55E+00	ND	ND	ND	ND	ND	ND	ND	1.54E+01	2.34E+01	5.43E+01	9.85E+00	-1.83E+02

9) This indicator includes all greenhouse gases excluding biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. In addition, the characterisation factors for the flows – CH₄ fossil, CH₄ biogenic and Dinitrogen monoxide – were updated. This indicator is identical to the GWP-total of EN 15804:2012+A2:2019 except that the characterisation factor for biogenic CO₂ is set to zero.

SCENARIO DOCUMENTATION- DATA SOURCES

Manufacturing energy scenario documentation

Scenario parameter	Value
Energy data source	Market for electricity, medium voltage (Reference product: electricity, medium voltage)
Energy emission factor	0.28 kg CO ₂ e / kWh
Energy data source	Heat production, natural gas, at boiler condensing modulating <100kW (Reference product: heat, central or small-scale, natural gas)
Energy emission factor	0.0725 kg CO ₂ e / MJ
Internal transport in A3	Market for propane, burned in building machine (Reference product: propane, burned in building machine) Ecoinvent 3.11
Internal transport	0.0923 kg CO ₂ e / MJ

Installation energy scenario documentation

Scenario information	Value
On site transport in A5	Market for diesel, burned in building machine (Reference product: diesel, burned in building machine)
On site transport	0.1 kg CO ₂ e / MJ

End of life scenario documentation

Scenario information	Value
Collection process – kg collected separately	4240
Collection process – kg collected with mixed waste	0
Recovery process – kg for re-use	0
Recovery process – kg for recycling	8+38+2835= 2881
Recovery process – kg for energy recovery	17
Disposal (total) – kg for final deposition	116+9+2+1215= 1342
Scenario assumptions e.g. transportation	0

THIRD-PARTY VERIFICATION STATEMENT

EPD Hub declares that this EPD is verified in accordance with ISO 14025 by an independent, third-party verifier. The project report on the Life Cycle Assessment and the report(s) on features of environmental relevance are filed at EPD Hub. EPD Hub PCR and ECO Platform verification checklist are used.

EPD Hub is not able to identify any unjustified deviations from the PCR and EN 15804+A2 in the Environmental Product Declaration and its project report.

EPD Hub maintains its independence as a third-party body; it was not involved in the execution of the LCA or in the development of the declaration and has no conflicts of interest regarding this verification.

The company-specific data and upstream and downstream data have been examined as regards plausibility and consistency. The publisher is responsible for ensuring the factual integrity and legal compliance of this declaration.

The software used in creation of this LCA and EPD is verified by EPD Hub to conform to the procedural and methodological requirements outlined in ISO 14025:2010, ISO 14040/14044, EN 15804+A2, and EPD Hub Core Product Category Rules and General Program Instructions.

Verified tools

Tool verifier: Magaly Gonzalez Vazquez

Tool verification validity: 27 March 2025 - 26 March 2028

Imane Uald Lamkaddam as an authorized verifier for EPD Hub Limited
01.04.2026



INDICATIVE A1-A3 RESULTS FOR ADDITIONAL PRODUCT VARIANTS

Please note that these results are based on life-cycle assessments, however, they are not subject to third-party verification.

Manhole Configurations	Results (kgCO ₂ e per unit) (A1-A3)	
	GWP- Total	GWP- Fossil
1	925.14	923.77
2	1,120.88	1,127.18
3	1,316.60	1,330.56
4	1,512.31	1,533.94
5	1,708.05	1,737.34
6	1,903.77	1,940.73

Vault Configurations	Results (kgCO ₂ e per unit) (A1-A3)	
	GWP- Total	GWP- Fossil
7	3,980.05	3,996.79
8	4,175.78	4,200.18
9	4,371.49	4,403.56
10	4,567.22	4,606.96
11	4,762.95	4,810.35
12	4,958.68	5,013.74
13	5,155.15	5,217.87
14	5,350.94	5,421.33
15	5,546.67	5,624.73
16	5,742.39	5,828.11
17	5,938.13	6,031.51
18	6,133.85	6,234.89
19	6,329.56	6,438.27