Sewatek Multi Penetration with flange and cellular rubber seal

Environmental Product Declaration

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

Rakennustiedon EPD
EPD Registration number: RTS_360_25
Date of issue: 5.3.2025
Date of expiry: 5.3.2030

General information

Manufacturer information

Manufacturer	Sewatek Oy
Address	Sepäntie 4, 07230 Askola, Finland
Website	https://www.sewatek.com/

Product identification

Product name	Sewatek Fire Stop
Declared unit	1 kg
Specific product name	Sewatek Fire Stop: Sewatek Multi Penetration with flange and cellular rubber seal
Place(s) of production	Askola, Finland

EPD information

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

EPD program operator	Building Information Foundation, RTS, Malminkatu 16 A, 00100 Helsinki, Finland
EPD standards	This EPD is in accordance with EN 15804+A2 and ISO 14025 standards.
Product category rules	The CEN standard EN 15804 serves as the core PCR. RTS PCR 2020
EPD author	Natalia Pennanen, Anni Viitala, Granlund Oy, Malminkaari 21, 00701 Helsinki, Finland
EPD verification	Independent verification of this EPD and data, according to ISO 14025: External verification
Verification date	3.2.2025
EPD verifier	Mari Kirss, Rangi Maja OÜ
EPD number	RTS_360_25
Publishing date	5.3.2025
EPD valid until	5.3.2030

Verified according to the requirements of EN 15804+A2 (product category rules) Independent verification of the declaration, according to EN ISO 14025:2010	
☒ External	☐ Internal
Third party verifier: Mari Kirss, Rangi Maja OÜ, Tallinn, Estonia , 03.02.2025	

Jukka Seppänen
RTS EPD Committee Secretary

Laura Apilo
Managing Director

Product information

Product description

The studied products are fire stop products. The assessment of environmental impacts has been made for following product types:

Products	Product variations covered in EPD	Declared unit	Intended Application	Product standards
Sewatek Multi Penetration with flange and cellular rubber seal	D80x, D105x and D140x	1 kg	Sewatek Multi Penetrations are ETA-assessed and CE-marked fire stops installed into bore hole or casting. The product consists of intumescent material an elastomeric seal, a cellular rubber seal, protective PE-plastic shell and an installation flange. The product is used as a fire stop for plastic pipes or cable bundles in concrete walls and floors or CLT structures. Most commonly used as bathroom sewer pipe fire stop.	ETA: 26.8.2024 / DoP SWT-20_0924

Representative product

EPD declares the results of the representative product D140. The results do not differ more than 10% between the other declared product and the representative product. The GWP total (A1-3) results of the minimum product are 10 % lower than results of the representative product that represent the worst-case product in terms of GWP-values.

Product raw material composition and technical information

Main substances of the products are presented in the table below.

MAIN MATERIALS OF FIRE STOP, SEWATEK MULTI PENETRATION

Sewatek Multi Penetration	Variation in products %	
Steel	42 - 49 %	FIN
Graphite tape	30 - 37 %	EU
Thermoplastic	7 -10 %	FIN
Thermoplastic elastomer	8 - 10 %	FIN
Cellular rubber	2 %	EU
Total mass of materials	0,125 - 0,288 kg	

Packaging material composition and technical information

Main packaging materials of products are presented in table below.

MAIN PACKAGING MATERIALS PER PRODUCT

Packaging material	% of weight	
Wood pallet	22 %	EU
Plastic	2 %	EU
Cardboard	76 %	FIN

Substances, reach - very high concern

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

Life-Cycle assessment

Life-Cycle assessment information

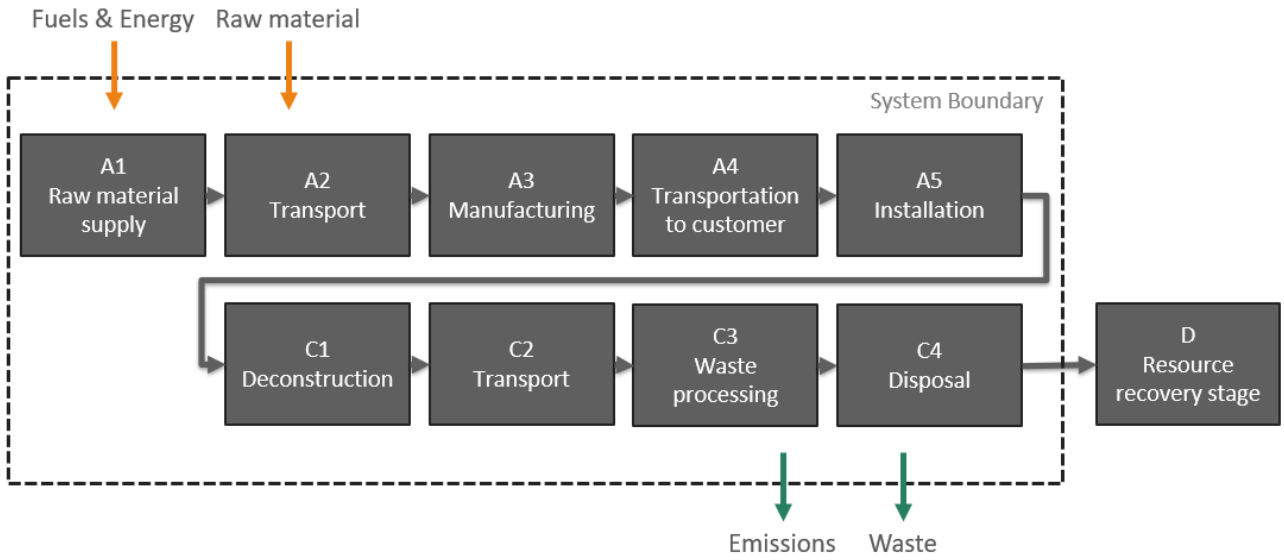
Period for data	1 year, 2023

Declared unit

Declared unit	1 kg
Declaration covers	This declaration covers the life cycle stages from cradle to gate with options (A4 and A5), modules C1–C4, and module D

System boundary

Studied system covers the following steps of life cycle according to EN 15804: **A1** Raw material supply**, A2** Transport, **A3** Manufacturing, **A4** Transportation of the product to construction site, **A5** Installation to building, **C1** Deconstruction, **C2** Transportation of end-of-life **C3** Waste processing and **C4** Disposal. In addition, the benefits and loads beyond the system boundary of stage **D** consist of product reuse, recovery and recycling. System boundary describing the input and output flows is shown below:

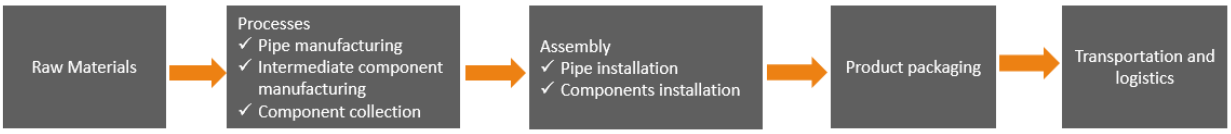


LCA System Boundary of studied products

The end-of-waste point of the studied product is the step when the material is used as fuel in an incineration plant or when recycled material is handled in the collection and sorting plant. The end-of-waste point of the waste flows in the A3 module is the step when the materials are collected and handled in the sorting plant.

The end-of-waste point of the packaging materials collected for recycling in the A5 module is the point when the materials are collected and handled in the sorting plant

Production processes on the Sewatek ´s production site cover following manufacturing processes; raw material supply (plastics, rubber and steel), pipe and intermediate product manufacturing including optimization and cutting as well as component collection, assembly of pipes and components and packaging the final product. After that, products will be transported to the client. The production processes of studied products are presented in the following figure.



The production processes of studied products

Studied system covers the following steps of life cycle according to EN 15804:

	Product Stage			Con-struction Process Stage		Use Stage							End-of-Life Stage				Benefits and loads beyond the system boundary		
	Raw material supply	Transport	Manufacturing	Transport to building	Installation to building	Use/applications	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction/demolition	Transport	Waste processing	Disposal	Reuse	Recovery	Recycling
	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D	D	D
Included	X	X	X	X	x								X	X	X	X	X	X	X
Relevancy	R	R	R	R	R	NR	NR	NR	NR	NR	NR	NR	R	R	R	R	R	R	R

Mandatory
Mandatory as per the RTS PCR section 6.2.1 rules and terms
Optional modules based on scenarios

The study does not omit any life cycle stages, processes or data needs that are mandatory according to EN 15804 and RTS PCR. The study excludes following life cycle stages which are optional according to EN 15804 and RTS PCR.

- B1 Use
- B2 Maintenance
- B3 Repairs
- B4 Replacement
- B5 Refurbishment
- B6 Operational energy use
- B7 Operational water use

Cut-Off criteria

This study follows the cut-off criteria stated in RTS PCR and EN 15804 -standard. This study does not exclude any modules or processes which represent more than 1 % of the emissions of the studied life cycle stage. The study does not exclude any hazardous materials or substances.

Excluded processes and the criteria for exclusion are given in the following table. Machines and facilities (capital goods) required for and during production are excluded, as is transportation of employees.

Process excluded from study	Cut-off criteria	Quantified contribution from process
A1-A3	Glue (low contribution to the total mass of product)	Mass < 0,9%
A1-A3	Rubber gloves (low contribution to the total mass of product)	Mass < 0,01 %
A1-A3	Glycol, refrigerant (low contribution to the total mass of product)	Mass < 0,0014 %

Allocation, estimates and assumptions

Allocation rules used are made according to ISO14044:2006. Allocation is avoided when possible and when necessary, allocation is made based on physical shares and avoiding double calculations. Allocation is required if the production process produces more than one product and the flows of materials, energy and waste cannot be separately measured for the studied product. Allocation used in generic data sources follow the requirements of the EN 15804 -standard. It should be noticed that the allocation method 'allocation, cut-off by classification' has been used for Ecoinvent 3.8 data, which complies with EN 15804. Avoiding allocation could not be avoided for following inputs as the information was only measured on factory process level.

- Electricity consumption: only measured on factory level.
- Waste: only measured on factory level.
- Packaging materials: only measured on factory level.

The inputs were allocated to the studied product based on production volume (mass in kilograms).

According to EN 15804, flows leaving the system at the end-of-waste boundary of the product stage (A1-A3) are allocated as co-products. According to EN 15804, processes that have a very low contribution to the overall revenue may be neglected in co-product allocation. Materials sent for recycling or energy recovery from manufacturing were not allocated, as it was estimated that their contribution to the overall revenue is very marginal. No other allocations were made in this assessment.

KEY ASSUMPTIONS

The scenarios included are currently in use and are representative for one of the most likely scenario alternatives.

A1 Raw Materials: Recycled content of steel raw material was assumed to be 35 % for stainless steel products. (SYKE 2023.)

A2 Transport: Information on transport distances has been collected based on information provided by material suppliers. Typical, generic values for transport equipment were used when exact data was missing. Some generic emissions values of raw materials include generic and conservative assumptions for

transportation of raw materials. It was assumed that these emission values include transportation from manufacturers to suppliers**.**

A4 Transport to building: The transportation from the production site in Askola to Helsinki was included to the study. It was assumed that no losses are generated during transportation.

A5 Installation to building: It can be assumed that there are no significant environmental impacts (energy or water use) caused by installation phase. Waste materials generated by use and handling of packaging materials were included to the study.

C1-4 End of life scenario: This stage was assumed based on the common practices of construction products (SYKE 2023). The material flows at the end of life were assumed to be following:

- C1: It was assumed that the products are disassembled as part of the concrete or wood structure and processed according to the main material.
- C2: Transportation distance 75 km road driving by lorry (SYKE 2023).
- C3-4: Two scenarios were included in the assessment. It was assumed that the products are disassembled as part of the concrete or wood structure and processed according to the main material.
    - Products integrated in a concrete structure: In the end-of-life stage, the concrete structure is crushed in the waste treatment plant. It was assumed that metal parts of the products can be separated from the crushed concrete and recycled as steel scrap. It was assumed that other materials included in the product are crushed into very small parts and are not separated from crushed concrete. After the crushing process, crushed concrete including small parts of product's materials end up being recycled as aggregate.
    - Products integrated in a wood structure: The materials end up at the waste treatment plant as part of a wooden structure, where the materials are separated from the structure. The plastic parts of the product end up in energy recovery and metal parts end up in final disposal.
    - It was assumed that 5 % of recyclable or recoverable materials end up as material loss.
- Module D covers the net benefits and loads arising from the reuse of products or the recycling or recovery of energy from end-of-waste state materials.
    - Recycling: Benefits from the recycling of materials of the products among crushed concrete were included to the assessment. This means that benefits from avoided primary gravel production due to the recycling of the crushed concrete and materials of the studied product that cannot be separated, are included to the Module D. Benefits from the recycling of steel materials were included to the assessment. Only share of virgin raw materials in the product composition were included to the module D. This means that benefits from avoided primary steel production due to the recycling of steel at end of life was included to the assessment.
    - Recovery: when a product is incinerated at its end-of-life and the produced heat is recovered, the benefits can include avoiding the production of energy. Net calorific value as received of the construction waste was assumed to be 1.757 kWh/kg and efficiency of heat and power co-generation was 90 %.

Validation of data

The quality requirements for the life cycle assessment were set according to the EN ISO 14044 standard (4.2.3.6) and EN 15804 standard (6.3.7).

This LCA study follows the standard EN 15804:2012+A2:2019 and RTS PCR and no decisions are made based on the values. The study does not consider long-term emissions (i.e. over 100 years). Characterization factors CML-IA version 4.1 have been used throughout the study. Impact assessment characterization factors are aligned with EF 3.0.

The calculations were conducted using One Click LCA -tool which is a cloud-based LCA software in compliancy with EN 15804 -standard.

Procedures for collection process specific data

Production specific data was collected directly from manufacturer's production plant. The data represents the production of the studied product at the plant from the materials transported to the facility and represents 1 year average. The data represents year 2023, which was the latest year with full year data. All gathered data was used without excluding categories in advance following the system boundaries set in earlier chapters.

Criteria for choosing the generic data

Generic data that was used for upstream and downstream processes represents complementary data from Ecoinvent 3.8 database.

The datasets were chosen to represent the studied system as closely as possible. When available supplier specific information was used for instance in form of EN 15804 EPDs or emissions profile of local energy supplier. When supplier specific information was not available the information sources were chosen based on their technical and geographical representativeness. Only when country specific or European data has not been available has global level data been used (concerns mainly data from ecoinvent 3.8)

As up-to-date data as possible was chosen and no more than five-year-old for producer specific data and ten years for generic data was used.

Environmental impact data

Sewatek Multi Penetration with flange and cellular rubber seal, The end-of-Life of concrete structure

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
GWP – total	kg CO_2e	5,59E+00	6,53E-03	1,78E-01	4,31E-04	6,08E-03	1,12E-02	8,33E-04	-3,58E-01
GWP – fossil	kg CO_2e	5,76E+00	6,53E-03	4,20E-03	4,31E-04	6,08E-03	1,12E-02	8,33E-04	-3,58E-01
GWP – biogenic	kg CO_2e	-1,74E-01	0,00E+00	1,74E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
GWP – LULUC	kg CO_2e	6,04E-03	2,41E-06	7,08E-06	4,27E-08	2,24E-06	1,38E-05	8,02E-07	3,82E-04
Ozone depletion pot.	kg CFC_{-11}e	1,17E-07	1,50E-09	3,85E-10	9,20E-11	1,40E-09	2,07E-09	3,14E-10	-1,04E-08
Acidification potential	mol H^+e	2,43E-02	2,76E-05	1,69E-05	4,48E-06	2,57E-05	1,34E-04	7,60E-06	-1,35E-03
EP-freshwater[3)]	kg Pe	4,58E-05	5,35E-08	9,76E-08	1,42E-09	4,97E-08	4,93E-07	9,83E-09	-2,84E-06
EP-marine	kg Ne	3,78E-03	8,23E-06	4,93E-06	1,98E-06	7,64E-06	3,14E-05	2,63E-06	-1,03E-05
EP-terrestrial	mol Ne	4,17E-02	9,06E-05	4,93E-05	2,17E-05	8,44E-05	3,58E-04	2,89E-05	-3,75E-03
POCP (“smog”)	kg NMVOCe	1,26E-02	2,90E-05	1,47E-05	5,97E-06	2,70E-05	1,00E-04	8,37E-06	-2,06E-03
ADP-minerals & metals	kg Sbe	7,22E-05	1,53E-08	3,54E-08	2,18E-10	1,42E-08	1,18E-06	2,15E-09	-1,12E-05
ADP-fossil resources	MJ	1,44E+02	9,79E-02	4,03E-02	5,80E-03	9,13E-02	1,85E-01	2,18E-02	-2,99E+00
Water use[2)]	m^3e depr.	9,55E-01	4,38E-04	6,88E-04	1,56E-05	4,10E-04	2,51E-03	8,30E-05	1,41E-01

1) GWP = Global Warming Potential; EP = Eutrophication potential; POCP = Photochemical ozone formation; ADP = Abiotic depletion potential.

2) 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 experienced with the indicator.

3) Required characterisation method and data are in kg P-eq. Multiply by 3,07 to get PO_4e.

USE OF NATURAL RESOURCES

Impact category	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Renew. PER as energy	MJ	2,37E+01	1,10E-03	2,74E-03	3,31E-05	1,03E-03	2,16E-02	2,34E-04	-4,34E-01
Renew. PER as material	MJ	1,13E+00	0,00E+00	-1,13E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Total use of renew. PER	MJ	2,49E+01	1,10E-03	-1,13E+00	3,31E-05	1,03E-03	2,16E-02	2,34E-04	-4,34E-01
Non-re. PER as energy	MJ	1,31E+02	9,79E-02	4,03E-02	5,80E-03	9,13E-02	1,85E-01	2,18E-02	-2,99E+00
Non-re. PER as material	MJ	1,20E+01	0,00E+00	-1,37E-01	0,00E+00	0,00E+00	-1,19E+01	0,00E+00	0,00E+00
Total use of non-ren. PER	MJ	1,43E+02	9,79E-02	-9,65E-02	5,80E-03	9,13E-02	-1,17E+01	2,18E-02	-2,99E+00
Secondary materials	kg	4,55E-01	2,72E-05	5,97E-05	2,26E-06	2,53E-05	1,46E-04	5,35E-06	2,49E-01
Renew. secondary fuels	MJ	1,50E-03	2,75E-07	3,68E-07	7,40E-09	2,56E-07	7,22E-06	1,63E-07	-5,00E-05
Non-ren. secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m^3	4,34E-02	1,27E-05	1,74E-05	3,51E-07	1,18E-05	1,43E-04	2,38E-05	-1,01E-02

1) PER = primary energy resources; Non-ren = Non renewable

END OF LIFE – WASTE

Impact category	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Hazardous waste	kg	4,58E-02	1,30E-04	2,92E-04	7,74E-06	1,21E-04	8,06E-04	0,00E+00	-2,21E-01
Non-hazardous waste	kg	1,22E+00	2,14E-03	5,97E-03	5,45E-05	1,99E-03	4,90E-01	1,37E-01	-7,22E-01
Radioactive waste	kg	2,21E-03	6,56E-07	2,27E-07	4,06E-08	6,11E-07	6,94E-07	0,00E+00	9,97E-08

END OF LIFE – OUTPUT FLOWS

Impact category	Unit	A1-A3	A4	A5	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	0,00E+00	0,00E+00
Materials for recycling	kg	9,76E-02	0,00E+00	8,19E-02	0,00E+00	0,00E+00	8,65E-01	0,00E+00	0,00E+00
Materials for energy recycling	kg	1,05E-01	0,00E+00	2,29E-02	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	0,00E+00	0,00E+00

Biogenic carbon content

PRODUCT'S BIOGENIC CARBON CONTENT AT THE FACTORY GATE

Biogenic carbon content	Unit (expressed per functional unit or per declared unit)
Biogenic carbon content in product	0 kg
Biogenic carbon content in accompanying packaging	0,0030 kg

Sewatek Multi Penetration with flange and cellular rubber seal, The end-of-Life of wood structure

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	C1	C2	C3	C4	D
GWP – total	kg CO_2e	4,31E-04	6,70E-03	1,32E+00	3,75E-04	-3,51E-01
GWP – fossil	kg CO_2e	4,31E-04	6,70E-03	1,32E+00	3,75E-04	-3,51E-01
GWP – biogenic	kg CO_2e	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
GWP – LULUC	kg CO_2e	4,27E-08	2,47E-06	2,26E-05	3,68E-07	3,89E-04
Ozone depletion pot.	kg $CFC_{-11}e$	9,20E-11	1,54E-09	3,96E-09	1,29E-10	-9,41E-09
Acidification potential	mol H^+e	4,48E-06	2,83E-05	4,13E-04	3,30E-06	-1,30E-03
EP-freshwater[3)]	kg Pe	1,42E-09	5,49E-08	8,13E-07	5,03E-09	-2,58E-06
EP-marine	kg Ne	1,98E-06	8,40E-06	1,65E-04	1,13E-06	2,77E-06
EP-terrestrial	mol Ne	2,17E-05	9,27E-05	1,72E-03	1,25E-05	-3,61E-03
POCP (“smog”)	kg NMVOCe	5,97E-06	2,97E-05	4,27E-04	3,61E-06	-2,01E-03
ADP-minerals & metals	kg Sbe	2,18E-10	1,57E-08	1,30E-06	1,09E-09	-1,11E-05
ADP-fossil resources	MJ	5,80E-03	1,00E-01	3,61E-01	9,31E-03	-2,89E+00
Water use[2)]	m^3e depr.	1,56E-05	4,48E-04	5,42E-02	4,31E-05	1,49E-01

USE OF NATURAL RESOURCES

Impact category	Unit	C1	C2	C3	C4	D
Renew. PER as energy	MJ	2,37E+01	1,10E-03	2,74E-03	3,31E-05	1,13E-03
Renew. PER as material	MJ	1,13E+00	0,00E+00	-1,13E+00	0,00E+00	0,00E+00
Total use of renew. PER	MJ	2,49E+01	1,10E-03	-1,13E+00	3,31E-05	1,13E-03
Non-re. PER as energy	MJ	1,31E+02	9,79E-02	4,03E-02	5,80E-03	1,00E-01
Non-re. PER as material	MJ	1,20E+01	0,00E+00	-1,37E-01	0,00E+00	0,00E+00
Total use of non-ren. PER	MJ	1,43E+02	9,79E-02	-9,65E-02	5,80E-03	1,00E-01
Secondary materials	kg	4,55E-01	2,72E-05	5,97E-05	2,26E-06	2,79E-05
Renew. secondary fuels	MJ	1,50E-03	2,75E-07	3,68E-07	7,40E-09	2,81E-07
Non-ren. secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m^3	4,34E-02	1,27E-05	1,74E-05	3,51E-07	1,30E-05

END OF LIFE – WASTE

Impact category	Unit	C1	C2	C3	C4	D
Hazardous waste	kg	4,58E-02	1,30E-04	2,92E-04	7,74E-06	1,33E-04
Non-hazardous waste	kg	1,22E+00	2,14E-03	5,97E-03	5,45E-05	2,19E-03
Radioactive waste	kg	2,21E-03	6,56E-07	2,27E-07	4,06E-08	6,74E-07

END OF LIFE – OUTPUT FLOWS

Impact category	Unit	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
Materials for recycling	kg	9,76E-02	0,00E+00	8,19E-02	0,00E+00	0,00E+00
Materials for energy recycling	kg	1,05E-01	0,00E+00	2,29E-02	0,00E+00	0,00E+00
Exported energy	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

BIOGENIC CARBON CONTENT

PRODUCT'S BIOGENIC CARBON CONTENT AT THE FACTORY GATE

Biogenic carbon content	Unit (expressed per functional unit or per declared unit)
Biogenic carbon content in product	0 kg
Biogenic carbon content in accompanying packaging	0,011 kg

Scenario documentation

MANUFACTURING ENERGY SCENARIO DOCUMENTATION

Energy type	Object	GWP value	Data quality	Representativeness
Renewable electricity	Electricity data quality and CO2 emission kg CO2 eq. / kWh The factory is heated by electricity	0,101 kg CO2 e / kWh	Electricity production, photovoltaic, 570kWp open ground installation, multi-Si (Reference product: electricity, low voltage) Electricity production, hydro, run-of-river (Reference product: electricity, high voltage) Electricity production, wind, 1-3MW turbine, onshore (Reference product: electricity, high voltage) EN15804+A1, EN15804+A2, Finland, 2021. Ecoinvent 3.8.	The processes included in the data set are well representative for the geography (Finland)

TRANSPORTATION SCENARIO

Parameter	Value
Fuel type and consumption of vehicle used for transport	Freight, lorry: diesel, maximum load capacity 32 t. Specific transport emissions 0,064 kg CO_2 equiv. / tn x km
Distance (km)	Average transport distance 63 km
Capacity utilization (%)	100 % for truck
Density of transported products (kg/m^3)	Density varies depending on the mass and size of the product type
Volume capacity utilization factor	1

INSTALLATION OF THE PRODUCT IN THE BUILDING

Parameter	Unit
Ancillary materials for installation (specified by material)	-
Water use	0 m^3
Other resource use	0 kWh (energy use is insignificant)
Quantitative description of energy type (regional mix) and consumption during the installation process	
Waste materials generated by product installation	Packaging materials per 1 unit of product Packaging material Plastic 0,0002 – 0,0004 kg Cardboard 0,0099 – 0,0288 kg Wood 0,0018 – 0,0044 kg

END-OF-LIFE SCENARIO

The end-of-life scenarios are presented per 1 kg of the finished product		
Process flow		
Collection process specified by type	kg collected separately	1 kg
	kg collected with mixed construction waste	
Recovery system specified by type	kg for reuse	
	kg for recycling (EOL of concrete structure)	0,8 kg
	kg for energy recovery (EOL of wood structure)	0,95 kg
Disposal specified by type	kg material for final deposition (EOL of concrete structure)	0,2 kg
	kg material for final deposition (EOL of wood structure)	0,05 kg

CONVERSION FACTORS

Product	Weight (kg)
D80x	0,125
D105x	0,214
D140	0,288

ANNEX 1: EPD RESULTS BY RTS PCR REQUIREMENTS

SEWATEK MULTI PENETRATION WITH FLANGE AND CELLULAR RUBBER SEAL

Impact category	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Global Warming Potential total	kg CO_2e / kg	5,59E+00	6,53E-03	1,78E-01	4,31E-04	6,08E-03	1,12E-02	8,33E-04	-3,58E-01
Abiotic depletion potential (ADP-elements) for non fossil resources	kg Sbe / kg	7,22E-05	1,53E-08	3,54E-08	2,18E-10	1,42E-08	1,18E-06	2,15E-09	-1,12E-05
Abiotic depletion potential (ADP-fossil fuels) for fossil resources (+A2)	MJ / kg	1,44E+02	9,79E-02	4,03E-02	5,80E-03	9,13E-02	1,85E-01	2,18E-02	-2,99E+00
Water use	m^3e depr. / kg	9,55E-01	4,38E-04	6,88E-04	1,56E-05	4,10E-04	2,51E-03	8,30E-05	1,41E-01
Use of secondary materials	kg / kg	4,55E-01	2,72E-05	5,97E-05	2,26E-06	2,53E-05	1,46E-04	5,35E-06	2,49E-01
Biogenic carbon content in product	kg C / kg	0,00E+00	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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