# Environmental Product Declaration

### The Ribbon Soap Dispenser

Programme	The International EPD® System
Programme operator	EPD International AB
Geographical scope	Global
Publication date	2023-07-20
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In accordance with ISO 14025 and EN 15804:2012+A2:2019/AC:2021

An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at www.environdec.com







THE INTERNATIONAL EPD® SYSTEM





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# **Programme information**

ISO standard ISO 21930 and CEN standard EN 15804 serves as the core Product Category Rules (PCR)

Product Category Rules (PCR): PCR 2019:14 Construction products, version 1.2.5, Construction EN 15804:2012 + A2:2019/AC:2021, Sustainability of Construction Works

PCR review was conducted by: The Technical Committee of the International EPD<sup>®</sup> System. Review chair: Claudia A. Peña, University of Concepción, Chile

The International EPD<sup>®</sup> System: EPD International AB Box 210 60 SE-100 31Stockholm, Sweden, www.environdec.com

Independent third-party verification of the declaration and data, according to ISO 14025:2006:

EPD process certification EPD verification  $\underline{x}$ 

Procedure for follow-up of data during EPD validity involves third party verifier:

Yes No (

The EPD owner has the sole ownership, liability, and responsibility for the EPD. EPDs within the same product category but from different programmes may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804.

Third party verifier: Prof. Ing. Vladimír Kočí, Ph.D., MBA, LCA Studio

Approved by: The International EPD<sup>®</sup> System Technical Committee, supported by the Secretariat

# **Programme information**

EPDs within the same product category but registered in different EPD programmes may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same version number) or be based on fully aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterisation factors); have equivalent content declarations; and be valid at the time of comparison.

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# How to read this EPD

An Environmental Product Declaration (EPD) is an ISO Type III Environmental Declaration based on ISO 14025 standard. An EPD transparently reports the environmental performance of products or services from a lifecycle perspective. The preparation of an EPD includes different stages, from acquiring raw materials to the end of life of the final product/service. EPDs are based on international standards and consider the entire value chain. Additionally, EPD is a third-party verified document. This EPD includes several sections described below.

#### General and Program Information

The first part of an EPD has information about the name of the manufacturer and product/ service and other general information such as the validity and expiration dates of the document, the name of the program operator, geographical scope, etc. The second page states the standards followed and gives information about the program operator, thirdparty verifier, etc. The followed Product Category Rule (PCR) is indicated on the second page.

## Company and Product Information

Information about the company and the investigated product is given in this section. It summarizes the characteristics of the product provided by the manufacturer. It also includes information about the product such as product composition and packaging.

#### **LCA Information**

LCA information is one of the most important parts of the EPD as it describes the functional/declared unit, time representativeness of the study, database(s) and LCA software, along with system boundaries. The table presented in this part has columns for each stage in the life cycle. The considered stages are marked 'X' whereas the ones that are not considered are labeled as 'NR'. Not all EPDs consider the full life cycle assessment for a product's entire life stages. The 'System Boundary' page is also the place where one can find detailed information about the stages and the assumptions made.

#### **LCA Results**

The results of the Life Cycle Assessment analysis are presented in table format. The first column in each table indicates the name of the impact category and their measurement units are presented in the second column. These tables show an amount at each life cycle stage to see the impact of different indicators on different stages. Each impact can be understood as what is released through the production of the declared unit of the material in this case, 1 unit of Ribbon produced during production.

# About the company

### All things considered.

We are The Splash Lab. Restrooms are the most often used spaces and the least considered. We're changing that. We have built on our reputation re-interpreting the rituals around hygiene and the restroom experience.

We believe the future is personal. We challenge conventional restroom norms via product innovation to create considered solutions for corporate, commercial, public, hospitality and residential spaces. We use rich raw materials, cutting-edge automation, and modular bathroom systems to powerfully and positively influence the lives of people and the planet.

#### **Sustainability**

TSL's award winning products make environmentally conscious restrooms a breeze to specify and a delight to use. For sustainability beyond resourceconsciousness, TSL manufactures products in long-wearing stainless steel and solid surface, keeping them out of landfills for years to come.

#### Inclusivity

We are committed to making restroom products that foster a safe, harmonious, rejuvenating, and functional space for everyone who passes through.

#### **Holistic Design**

From the smallest detail of sensor placement to the high quality finishes that bring together your aesthetic vision, we pledge to consider every human element of interaction with our products.

# **Product information**

Calibrated to dispense a uniform amount of soap with each activation, The Ribbon Soap dispenser promotes proactive maintenance. Foam soap feels luxurious in any environment and discourages overuse. This product is a representative product among the 'soap dispensers' category of the manufacturer since it bears the highest environmental performance among the group. The EPD covers the products below as well:

1.5 kg

#### The Ribbon Soap Dispenser

TSL.R.010/1 The Ribbon Soap Dispenser

### Also covered by this declaration

1	TSL.938 Wall Mounted Cylindrical Soap Dispenser	.78 kg
	TSL.420 Deck Mounted Sensor Soap Dispener	1 kg
┝───	TSL.467 Wall Mounted Sensor Soap Dispenser	.25 kg
<b> </b>	TSL.470 Wall Mounted Manual Soap Dispenser	.42 kg
<b></b>	TSL.C.040/1 The Channel Soap Dispenser	1.5 kg
	TSL.937 Wall Mounted Sensor Soap Dispenser	1.4 kg

# Product information

The product investigated in this EPD is the company's Ribbon Soap Dispenser. Fully compatible with the The Splash Lab Soap System, the automatic foaming nozzle reliably produces a precise dose of soap every time. The system is easily maintained, with the nozzle simple and quick to replace.

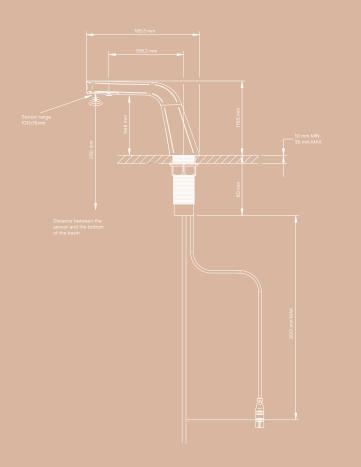
The material composition and packaging information is provided in the tables below.

#### **Raw Material**

Stainless steel	42.6%
Plastic parts (PA66, PP, Nylon etc.)	16.4%
Cable & Electronic components	14.0%
AB Corrugated paper	9.9%
Expandable Polyethylene	6.8%
Galvanized steel	6.6%
Aluminium	2.5%
Rubber	0.8%
Others	0.4%

#### **Packaging Material**

Cardboard	78.8%	
Polystyrene & Other plastics	21.2%	



# **Technical data**

Warranty	10 years from date of purchase
Material	Solid surface
Support brackets	Powder-coated steel - Refer to Installation manual for spacing and setting out
Finishes	See reference to supplier materials - Primarily Hi Macs, Corian
Wall construction	Brackets included. Installer should ascertain that wall construction is sufficiently designed to support the Monolith
Plumbing	Connection to 1 <sup>1/4°</sup> waste outlet required. (one connection per user) Installer to provide water for taps. See separate datasheet for The Splash Lab sensor taps
Access requirements	Solenoid and isolation valves must be accessible for initial installation & commissioning and for ongoing and routine maintenance
Wall fixings	Must be fixed to a suitable wall substrate to allow for the correct use of the Monolith. The Splash Lab recommend that installers contact a fixings specialist for advice to ensure the correct fixings are used for the location. Wall fixings are not included with the Monolith.

# System boundary

### A1 Raw material supply

This stage includes materials extraction and pre-treatment processes before production. Main materials used in the product are stainless and galvanized steel, aluminium, rubber, polethylene, electronic components and cables. Environmental impacts of materials are considered in this stage.

### A2 Transport

This stage is relevant for the delivery of materials to the production plant. Highway transport is the mean of transport at this stage. Transport distances are provided by the manufacturer as average values.

### A3 Manufacturing

This stage includes manufacturing related impacts. The following processes are included: Stainless steel is carefully sourced for production, then cast to form the housing. Additional steel fittings are machined and the individual pieces are PVD-coated in a vacuum chamber. The housing is assembled and internal components are added prior to packaging.

### A4 Transport

This stage is relevant for the delivery of final product to the intended markets and customers. Highway, and seaway transportation are involved in this stage. Transport distances are provided by the manufacturer as average values.

### **B1** Usage

Due to the relatively low impact of soap use considering the whole life cycle of the product, impact for this stage is assumed zero.

### B6 Operational Energy Use

The product consumes electricity during operation. Maximum output is 9W. Assuming a 3-second sensor activation per use and 200 uses per day, total electricity requirement of the product is calculated through the RSL.

# System boundary

### C1 Deconstruction and demolition

This stage includes the impacts during the dismantling of the Ribbon Soap Dispenser. Manual dismantling is assumed, thus, no energy or additional material are needed for the dismantling of the product.

### C2 Transport

This stage includes the transportation of discarded products to the waste processing/disposal area. 50 km distance by trucks is assumed.

### C3 <u>Waste proc</u>essing

It is assumed that 90% of the metal parts (steel and aluminium) of the product are recycled, whereas 80% of the plastics parts are incinerated. The rest is assumed landfilled.

### C4 Disposal

Landfilling impacts are calculated at this stage.

### D

#### Reuse, recycling, and recovery potential

Metals that are recycled are assumed to substitute the use of virgin metals. In addition, the benefits of heat recovery from the incineration of plastics are included.

# LCA information

Declared unit	1 unit of The Ribbon Soap Dispenser produced by The Splash Lab.
Geographical scope	The geographical scope of this EPD is Global.
System boundary	Cradle to gate with options, modules C1-C4, module D and with optional module A4.
Database and LCA software	Ecoinvent 3.9.1 and SimaPro 9.5.
Period under review	All primary data collected from The Splash Lab is for the year 2022.
Allocations	Water consumption, energy consumption and raw material transportation were weighted according to 2022 production figures. In addition, hazardous and non-hazardous waste amounts were also allocated from the 2022 total waste generation.
Cut-off criteria	1% cut-off applied. Data for elementary flows to and from the product system contributing to a minimum of 99% of the declared environmental impacts have been included.
REACH regulation	No substances included in the Candidate List of Substances of Very High Concern for authorization under the REACH regulations are present in this product either above the threshold for registration with the European Chemicals Agency or above 0.1% (wt/wt)
LCA Modelling, Calculation and Data Quality	The results of the LCA with the indicators as per EPD requirement are given in the LCA result tables. EN15804 method is followed. All energy calculations were obtained using Cumulative Energy Demand, Low Heating Values (LHV) methodology, while freshwater use is calculated within selected inventory flows in SimaPro according to the PCR. Corresponding regional regional energy datasets were used for all energy related activities.

	Product stage Construction process stage				Use stage						End-of-life stage			Benefits and loads			
	Raw materials supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction and demolition	Transport	Waste processing	Disposal	Future reuse, recycling or energy recovery potentials
Module	A1	A2	A3	A4	A5	B1	B2	В3	B4	B5	B6	<b>B7</b>	C1	C2	C3	C4	D
Declared modules	x	х	х	x	ND	x	ND	ND	ND	ND	x	×	x	х	x	x	Х
Geography	TW	TW	TW	GLO	_	GLO	_	_	_	_	UK	GLO	GLO	GLO	GLO	GLO	GLO
Specific data used	>90%				_												
Variation / products	>10%										-						
Variation / sites			0%	6								_					

X = Included in LCA, ND= Not declared

# LCA results

Unit	A1-A3	A4	B1	B6	C1	C2	C3	C4	D
kg CO <sub>2</sub> eq	3.48E+01	1.19E+00	0.00E+00	1.52E+00	0.00E+00	1.21E-02	1.24E+00	1.52E-02	-3.33E+00
kg CO <sub>2</sub> eq	-9.33E-02	-1.31E-04	0.00E+00	2.63E-03	0.00E+00	4.59E-06	3.10E-05	2.81E-02	3.16E-03
kg CO <sub>2</sub> eq	6.71E-02	8.67E-04	0.00E+00	1.84E-03	0.00E+00	6.20E-06	3.69E-06	1.45E-06	-9.54E-03
kg CO <sub>2</sub> eq	3.48E+01	1.19E+00	0.00E+00	1.53E+00	0.00E+00	1.21E-02	1.24E+00	4.33E-02	-3.34E+00
kg CFC-11 eq	8.25E-07	1.84E-08	0.00E+00	7.80E-08	0.00E+00	2.05E-10	3.49E-10	6.86E-11	-1.09E-07
mol H+ eq	3.06E-01	3.01E-02	0.00E+00	5.21E-03	0.00E+00	3.31E-05	1.61E-04	1.94E-05	-9.97E-03
kg P eq	3.77E-02	4.95E-05	0.00E+00	2.58E-04	0.00E+00	1.01E-06	1.68E-06	7.25E-07	-9.42E-04
kg N eq	5.09E-02	7.54E-03	0.00E+00	1.14E-03	0.00E+00	8.71E-06	8.08E-05	1.16E-04	-2.29E-03
mol N eq	5.52E-01	8.33E-02	0.00E+00	1.31E-02	0.00E+00	9.01E-05	8.26E-04	7.52E-05	-2.38E-02
kg NMVOC	2.01E-01	2.29E-02	0.00E+00	3.84E-03	0.00E+00	4.77E-05	2.06E-04	3.77E-05	-1.30E-02
kg Sb eq	1.06E-02	1.51E-06	0.00E+00	2.16E-05	0.00E+00	3.38E-08	2.65E-08	5.91E-09	-2.03E-06
MJ	4.75E+02	1.51E+O1	0.00E+00	3.88E+O1	0.00E+00	1.82E-01	1.18E-01	5.77E-02	-4.21E+O1
m3 depriv.	7.95E+00	4.24E-02	0.00E+00	1.10E-01	0.00E+00	9.27E-04	2.90E-03	1.31E-03	-1.62E-01
disease inc.	2.44E-06	4.85E-08	0.00E+00	3.19E-08	0.00E+00	1.19E-09	8.11E-10	3.90E-10	-1.56E-07
kBq U-235 eq	3.14E+00	8.56E-03	0.00E+00	1.32E+00	0.00E+00	1.67E-04	1.46E-04	1.43E-04	-1.32E-01
CTUh	7.63E-08	5.17E-10	0.00E+00	6.91E-10	0.00E+00	5.36E-12	4.28E-11	2.25E-12	-1.09E-08
CTUh	1.21E-06	5.66E-09	0.00E+00	2.70E-08	0.00E+00	1.32E-10	1.82E-09	8.52E-11	-1.94E-08
Pt	2.71E+O2	3.89E+00	0.00E+00	1.99E+01	0.00E+00	1.85E-01	3.36E-02	1.24E-01	-4.39E+OC
Myms GWP-total: Climate change, GWP-fossil: Climate change- fossil, GWP-biogenic: Climate change - biogenic, GWP-luluc: Climate change - land use and transformation, ODP: Ozone layer depletion, AP: Acidification terrestrial and freshwater, EP-freshwater: Eutrophication freshwater, EP-marine: Eutrophication marine, EP-terrestrial: Eutrophication terrestrial, POCP: Photochemical oxidation, ADPE: Abiotic depletion - elements, ADPF: Abiotic depletion - fossil resources, WDP: Water scarcity, PM: Respiratory inorganics - particulate matter, IR: Ionising radiation, ETP-FW: Ecotoxicity freshwater, HTP-c: Cancer human health effects, HTP-nc: Non-									
			iring, A4: Transpo	rt, C1: Deconstr	uction / Demoliti	on, C2: Transpo	rt, C3: Waste Pro	ocessing, C4: Dis	posal, D: Ben-
to possible nuclear	accidents, occup	ational exposure	e nor due to radi	pactive waste di	ition on human he sposal in underg	ealth of the nucl round facilities.	lear fuel cycle. It Potential ionizin	does not consic g radiation from	ler effects due the soil, from
The results of this e indicator.	nvironmental imp	act indicator sh	all be used with a	care as the unce	ertainties on thes	e results are hig	h or as there is	limited experienc	ced with the
genic carbon co	ntent acco	rding to F	N 15804+A	2					
	kg CO2 eq   kg CO2 eq   kg CO2 eq   kg CO2 eq   kg CFC-11 eq   mol H+ eq   kg P eq   kg N eq   mol N eq   kg Sb eq   MJ   m3 depriv.   disease inc.   kBq U-235 eq   CTUh   CTUh   Pt   GWP-total: Climate transformation, ODF   EP-terrestrial: Eutro scarcity, PM: Respirat cancer human healt   AI: Raw Material Suge efits and Loads Bey   This impact categor to possible nuclear radon and from som   The results of this e indicator.	kg $CO_2 eq$ $3.48E+01$ kg $CO_2 eq$ $-9.33E-02$ kg $CO_2 eq$ $6.71E-02$ kg $CO_2 eq$ $3.48E+01$ kg $CFC-11 eq$ $8.25E-07$ mol H+ eq $3.06E-01$ kg P eq $3.77E-02$ kg N eq $5.09E-02$ mol N eq $5.52E-01$ kg Sb eq $1.06E-02$ MJ $4.75E+02$ m3 depriv. $7.95E+00$ disease inc. $2.44E-06$ kBq U-235 eq $3.14E+00$ CTUh $1.21E-06$ Pt $2.71E+02$ GWP-total: Climate change, GWP-foot transformation, ODP: Ozone layer de EP-terrestrial: Eutrophication terrest scarcity, PM: Respiratory inorganics - cancer human health effects, SQP: LaAl: Raw Material Supply, A2: Transpor efits and Loads Beyont the System EThis impact category deals mainly wit to possible nuclear accidents, occup radon and from some construction m The results of this environmental imp indicator.	kg $CO_2 eq$ $3.48E+01$ $1.19E+00$ kg $CO_2 eq$ $-9.33E-02$ $-1.31E-04$ kg $CO_2 eq$ $6.71E-02$ $8.67E-04$ kg $CO_2 eq$ $3.48E+01$ $1.19E+00$ kg $CFC-11 eq$ $8.25E-07$ $1.84E-08$ mol H+ eq $3.06E-01$ $3.01E-02$ kg P eq $3.77E-02$ $4.95E-05$ kg N eq $5.09E-02$ $7.54E-03$ mol N eq $5.52E-01$ $8.33E-02$ kg Sb eq $1.06E-02$ $1.51E-06$ MJ $4.75E+02$ $1.51E+01$ m3 depriv. $7.95E+00$ $4.24E-02$ disease inc. $2.44E-06$ $4.85E-03$ CTUh $7.63E-08$ $5.17E-10$ CTUh $1.21E-06$ $5.66E-03$ Pt $2.71E+02$ $3.89E+00$ GWP-total: Climate change, GWP-fossil: Climate change, FP-terrestrial. POCP: Phots scarcity, PM: Respiratory inorganics - particulate mat cancer human health effects, SQP: Land use relatedA1: Raw Material Supply, A2: Transport, A3: Manufactu efits and Loads Beyond the System Boundary.This impact category deals mainly with the eventual i to possible nuclear accidents, occupational exposure radon and from some construction materials is also rThe results of this environmental impact indicator sh indicator.	kg $CO_2 eq$ $3.48E+01$ $1.19E+00$ $0.00E+00$ kg $CO_2 eq$ $-9.33E-02$ $-1.31E-04$ $0.00E+00$ kg $CO_2 eq$ $6.71E-02$ $8.67E-04$ $0.00E+00$ kg $CO_2 eq$ $3.48E+01$ $119E+00$ $0.00E+00$ kg $CFC-11 eq$ $8.25E-07$ $1.84E-08$ $0.00E+00$ mol H+ eq $3.06E-01$ $3.01E-02$ $0.00E+00$ kg P eq $3.77E-02$ $4.95E-05$ $0.00E+00$ kg N eq $5.09E-02$ $7.54E-03$ $0.00E+00$ mol N eq $5.52E-01$ $8.33E-02$ $0.00E+00$ kg Sb eq $1.06E-02$ $1.51E-06$ $0.00E+00$ MJ $4.75E+02$ $1.51E+01$ $0.00E+00$ MJ $4.75E+02$ $1.51E+01$ $0.00E+00$ disease inc. $2.44E-06$ $4.85E-03$ $0.00E+00$ CTUh $7.63E-08$ $5.17E-10$ $0.00E+00$ CTUh $1.21E-06$ $5.66E-09$ $0.00E+00$ Pt $2.71E+02$ $3.89E+00$ $0.00E+00$ GWP-total: Climate change, GWP-fossil: Climate change- fossil, GWPfransformation, OP: Ozone layer depletion, AP: Acidification terrestriction terrestrial. Eutrophication terrestrial. POCP: Photochemical oxidat scarcity, PM: Respiratory inorganics - particulate matter, IR: lonising recence human health effects, SQP: Land use related impacts, soil qual A1: Raw Material Supply, A2: Transport, A3: Manufacturing, A4: Transport for soil climate change of low dot to dot	kg $CO_2 eq$ $3.48E+01$ $1.19E+00$ $0.00E+00$ $1.52E+00$ kg $CO_2 eq$ $-9.33E-02$ $-1.31E-04$ $0.00E+00$ $2.63E-03$ kg $CO_2 eq$ $6.71E-02$ $8.67E-04$ $0.00E+00$ $1.84E-03$ kg $CO_2 eq$ $3.48E+01$ $1.19E+00$ $0.00E+00$ $1.53E+00$ kg $CC_1 eq$ $3.48E+01$ $1.19E+00$ $0.00E+00$ $1.53E+00$ kg $CFC-11 eq$ $8.25E-07$ $1.84E-08$ $0.00E+00$ $7.80E-08$ mol H+ eq $3.06E-01$ $3.01E-02$ $0.00E+00$ $5.21E-03$ kg P eq $3.77E-02$ $4.95E-05$ $0.00E+00$ $2.58E-04$ kg N eq $5.09E-02$ $7.54E-03$ $0.00E+00$ $1.14E-03$ mol N eq $5.52E-01$ $8.33E-02$ $0.00E+00$ $1.31E-02$ kg NMVOC $2.01E-01$ $2.29E-02$ $0.00E+00$ $3.84E-03$ kg Sb eq $1.06E-02$ $1.51E-06$ $0.00E+00$ $3.88E+01$ m3 depriv. $7.95E+00$ $4.24E-02$ $0.00E+00$ $3.19E-08$ kBq U-235 eq $3.14E+00$ $8.56E-03$ $0.00E+00$ $3.19E-08$ kBq U-235 eq $3.14E+00$ $8.56E-09$ $0.00E+00$ $2.70E-08$ Pt $2.71E+02$ $3.89E+00$ $0.00E+00$ $1.99E+01$ GWP-total: Climate change, GWP-fossil: Climate change-fossil, GWP-biogenic: Climat transformation, ODP: Ozone layer depletion, AP- Acidification terrestrial and freshwat ter-extrail Supply, A2: Transport, A3: Manufacturing, A4: Transport, C1: Deconstr efits and Loads Beyond the System Boundary.A1: Raw Material Supply, A2: Transport, A	kg CO2 eq $3.48E+01$ $1.19E+00$ $0.00E+00$ $1.52E+00$ $0.00E+00$ kg CO2 eq $-9.33E-02$ $-1.31E-04$ $0.00E+00$ $2.63E-03$ $0.00E+00$ kg CO2 eq $6.71E-02$ $8.67E-04$ $0.00E+00$ $1.84E-03$ $0.00E+00$ kg CO2 eq $3.48E+01$ $1.19E+00$ $0.00E+00$ $1.53E+00$ $0.00E+00$ kg CFC-11 eq $8.25E-07$ $1.84E-08$ $0.00E+00$ $7.80E-08$ $0.00E+00$ mol H+ eq $3.06E-01$ $3.01E-02$ $0.00E+00$ $5.21E-03$ $0.00E+00$ kg P eq $3.77E-02$ $4.95E-05$ $0.00E+00$ $2.58E-04$ $0.00E+00$ kg N eq $5.09E-02$ $7.54E-03$ $0.00E+00$ $1.14E-03$ $0.00E+00$ mol N eq $5.52E-01$ $8.33E-02$ $0.00E+00$ $1.31E-02$ $0.00E+00$ kg NMVOC $2.01E-01$ $2.29E-02$ $0.00E+00$ $3.84E-03$ $0.00E+00$ kg Sb eq $1.06E-02$ $1.51E-06$ $0.00E+00$ $3.84E-03$ $0.00E+00$ MJ $4.75E+02$ $1.51E+01$ $0.00E+00$ $3.88E+01$ $0.00E+00$ m3 depriv. $7.95E+00$ $4.24E-02$ $0.00E+00$ $3.19E-08$ $0.00E+00$ CTUh $7.63E-08$ $5.17E-10$ $0.00E+00$ $3.9E+00$ $0.00E+00$ CTUh $7.63E-08$ $5.17E-10$ $0.00E+00$ $0.00E+00$ CTUh $1.21E+02$ $3.89E+00$ $0.00E+00$ $0.00E+00$ CTUh $7.63E-08$ $5.17E-10$ $0.00E+00$ $0.00E+00$ CTUh $7.21E+02$ $3.89E+00$	$ \begin{array}{c} kg \ CO_2 \ eq \\ 3.48E+01 \\ 119E+00 \\ 0.00E+00 \\ 1.52E+00 \\ 0.00E+00 \\ 2.63E-03 \\ 0.00E+00 \\ 1.52E+00 \\ 0.00E+00 $	$ \begin{array}{c} kg \ CO_2 \ eq \\ g \ CO_2 \ eq \\ -9.33E-02 \\ -1.31E-04 \\ 0.00E+00 \\ 2.63E-03 \\ 0.00E+00 \\ 2.63E-03 \\ 0.00E+00 \\ 4.59E-06 \\ 3.10E-05 \\ kg \ CO_2 \ eq \\ 6.71E-02 \\ 8.67E-04 \\ 0.00E+00 \\ 1.84E-03 \\ 0.00E+00 \\ 1.21E-02 \\ 1.21E-$	kg CO2 eq   3.48E+01   119E+00   0.00E+00   1.52E+00   0.00E+00   1.21E-02   1.24E+00   1.52E-02     kg CO2 eq   -9.33E-02   -1.31E-04   0.00E+00   2.63E-03   0.00E+00   4.59E-06   3.10E-05   2.81E-02     kg CO2 eq   6.71E-02   8.67E-04   0.00E+00   1.84E-03   0.00E+00   6.20E-06   3.69E-06   1.45E-06     kg CO2 eq   3.48E+01   119E+00   0.00E+00   1.53E+00   0.00E+00   2.25E-10   3.49E-10   6.80E-11     mol H+ eq   3.06E-01   3.01E-02   0.00E+00   2.58E-04   0.00E+00   3.31E-05   1.61E-04   1.94E-05     kg P eq   3.77E-02   4.95E-05   0.00E+00   1.31E-02   0.00E+00   8.71E-06   8.08E-05   1.16E-04   1.94E-05     kg N eq   5.09E-02   7.54E-03   0.00E+00   1.31E-02   0.00E+00   9.01E-05   8.26E-04   7.52E-05     kg NMVOC   2.01E-01   2.29E-02   0.00E+00   1.31E-03   0.00E+00   9.01E-05   8.26E-04   3.77E-05

Biogenic carbon content in product	kg C	3.22E-O2	
Biogenic carbon content in packaging	kg C	5.78E-O2	

#### **Resource use**

Indicator	Unit	A1-A3	A4	B1	B6	C1	C2	C3	C4	D
PERE	MJ	5.97E+O1	1.24E-01	0.00E+00	1.01E+01	0.00E+00	2.31E-03	2.97E-03	2.29E-03	-2.81E+00
PERM	MJ	0.00E+00								
PERT	MJ	5.97E+01	1.24E-01	0.00E+00	1.01E+01	0.00E+00	2.31E-03	2.97E-03	2.29E-03	-2.81E+00
PENRE	MJ	4.75E+02	1.51E+O1	0.00E+00	3.88E+O1	0.00E+00	1.82E-01	1.17E-01	5.84E-02	-4.21E+01
PENRM	MJ	0.00E+00								
PENRT	MJ	4.75E+02	1.51E+O1	0.00E+00	3.88E+O1	0.00E+00	1.82E-01	1.17E-01	5.84E-02	-4.21E+O1
SM	kg	0.00E+00								
RSF	MJ	0.00E+00								
NRSF	MJ	0.00E+00								
FW	m <sup>3</sup>	4.33E-01	1.68E-03	0.00E+00	1.04E-02	0.00E+00	3.72E-05	3.53E-04	6.13E-05	-9.97E-03

Acronyms

PERE: Use of renewable primary energy excluding resources used as raw materials, PERM: Use of renewable primary energy resources used as raw materials, PERT: Total use of renewable primary energy, PENRE: Use of non-renewable primary energy excluding resources used as raw materials, PENRM: Use of non-renewable primary energy resources used as raw materials, PENRT: Total use of non-renewable primary energy, SM: Secondary material, RSF: Renewable secondary fuels, NRSF: Non-renewable secondary fuels, FW: Net use of fresh water.

#### Waste output flows

Indicator	Unit	A1-A3	A4	B1	B6	C1	C2	C3	C4	D
HWD	kg	0.00E+00								
NHWD	kg	5.99E-03	0.00E+00							
RWD	kg	0.00E+00								
CRU	kg	0.00E+00								
MFR	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.41E+00	0.00E+00	0.00E+00
MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.70E-01	0.00E+00	0.00E+00
EE(Electrical)	MJ	0.00E+00								
EE(Thermal)	MJ	0.00E+00								
Acronyms	HWD: Hazardous waste disposed, NHWD: Non-hazardous waste disposed, RWD: Radioactive waste disposed, CRU: Components for reuse, MFR: Material for recycling,									

MER: Materials for energy recovery, EE (Electrical): Exported energy electrical, EE (Thermal): Exported energy thermal.

Climate impact										
Indicator	Unit	A1-A3	A4	B1	B6	C1	C2	C3	C4	D
*GHG-GWP	kg CO <sub>2</sub> eq	3.52E+01	1.19E+00	0.00E+00	1.53E+00	0.00E+00	1.21E-02	1.24E+00	3.67E-02	-3.35E+00

GWP-GHG = Global Warming Potential total excl. biogenic carbon following IPCC AR5 methodology \* The indicator includes all greenhouse gases included in GWP-total but excludes biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. This indicator is thus equal to the GWP indicator originally defined in EN 15804:2012+A1:2013

# References

GPI / General Programme Instructions of the International EPD® System. Version 4.0.

EN ISO 9001 / Quality Management Systems - Requirements

EN ISO 14001 / Environmental Management Systems - Requirements

Ecoinvent / Ecoinvent Centre. www.ecoinvent.org

ISO 14020:2000 / Environmental Labels and Declarations - General principles

EN 15804:2012+A2:2019 / AC:2021 Sustainability of construction works - Environmental Product Declarations - Core rules for the product category of construction products

ISO 14025 / DIN EN ISO 14025:2009-11: Environmental labels and declarations -Type III environmental declarations - Principles and procedures

ISO 14040 / 44 / DIN EN ISO 14040:2006-10. Environmental management - Life cycle assessment - Principles and framework (ISO14040:2006) and Requirements and guidelines (ISO 14044:2006)

SimaPro / SimaPro LCA Software. Pré Consultants. the Netherlands. www.presustainability.com

PCR for Construction Products and Construction Services / Prepared by IVL Swedish Environmental Research Institute. Swedish Environmental

Protection Agency. SP Trä. Swedish Wood Preservation Institute. Swedisol. SCDA. Svenskt Limträ AB. SSAB. The International EPD System. 2019:14 Version 1.2.5

The International EPD<sup>®</sup> System / The International EPD<sup>®</sup> System is a programme for type III environmental declarations. maintaining a system to verify and register EPD<sup>®</sup>s as well as keeping a library of EPD<sup>®</sup>s and PCRs in accordance with ISO 14025. www.environdec.com

#### www.thesplashlab.com

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## THE SPLASH LAB

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