Environmental Product Declaration

The Aerofoil Basin

Programme	The International EPD® System
Programme operator	EPD International AB
Geographical scope	Global
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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 SPLASH LAB

EPD® THE INTERNATIONAL EPD® SYSTEM

ECO PLATFORM EPD VERIFIED

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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® System. Review chair: Claudia A. Peña, University of Concepción, Chile
The International EPD® 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 [x]
Procedure for follow-up of data during EPD validity involves third party verifier: Yes No [x]
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® 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, third-party 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 kg of Aerofoil. The benefits of reuse/recycling of the declared product are reflected in this section. The first impact in the table is global warming potential (GWP), which shows how much CO2 is released at each stage. Other impacts include eutrophication potential, acidification potential, ozone layer depletion, land use related impacts, etc. The second table provides results for resource use and the third table is about the waste produced during production. The fourth and final table shows the results for the GWP-GHG indicator, which is almost equivalent to the GWP-Total indicator mentioned previously. The only difference is that this indicator excludes the biogenic carbon content by following a certain methodology.

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 resource-consciousness, 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

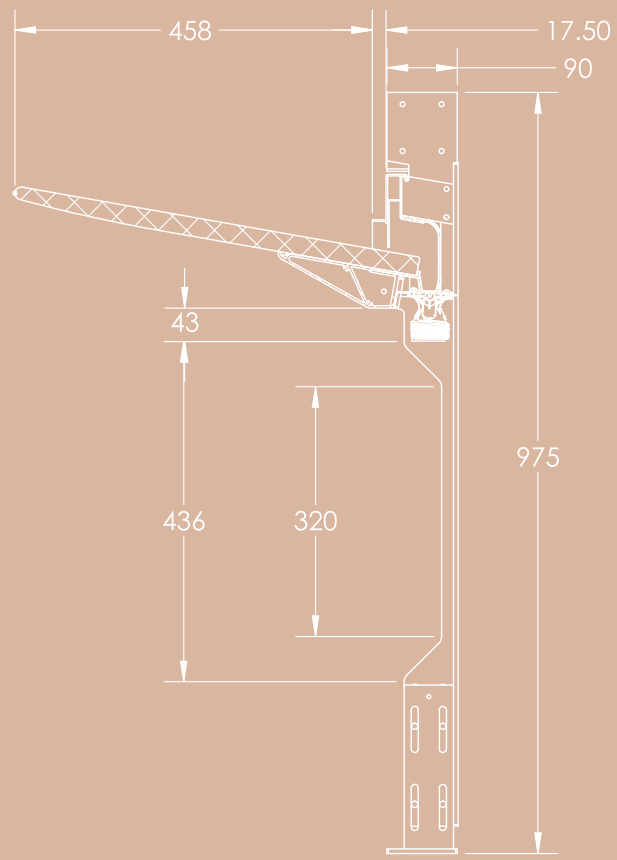
A hand-washing concept that challenges conventional ideas of what a sink can be, the Aerofoil is a floating sink crafted from a single slab of solid surface, supported by a hidden framework. The Aerofoil's modular system creates code-compliant units that can be quickly and easily compounded to fit any project.

USA

	Single user
	Two user
	Three user
	Four user

UK

	Single user
	Two user
	Three user
	Four user
	Five user



Product information

The product investigated in this EPD is the company's sink product, called Aerofoil. The Aerofoil is a modular solid surface basin system in a range of standard and bespoke lengths to accommodate users in any washroom. An average weight of 87 kg is assumed in the analysis.

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

Raw material	
Methyl Methacrylate (MMA)	20%
Polymethyl Methacrylate (PMMA)	10%
Aluminium Trihydrate (ATH)	60%
Pigment	10%

Packaging material	
Cardboard	80%
Plastic	20%
Paper	
Others	

Technical data

Warranty	10 year material warranty 1 year mechanical warranty
Material	Solid surface
Support frame	Mild steel, stainless steel, aluminium and PVC
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 Aerofoil.
Plumbing	Connection to 1 1/4" 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 Aerofoil. 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 Aerofoil.

System boundary

A1
Raw material supply

This stage includes materials extraction and pre-treatment processes before production. Main materials used in the product are methyl methacrylate, polymethyl methacrylate, aluminium trihydrate and some inorganic pigments and additives. Environmental impacts of these 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. Following processes are included: Steel, plastic, and anodised aluminium are extruded in 5m lengths for the gully, washplane and grate housing extrusions. Extrusions are then bent as needed, cut to length, and fitted with end caps. The steel for the leg formations is CNC-machined and welded together, then fitted with an aluminium clamping block to hold the washplane in place. Finally, the washplane is fabricated in solid surface using a CNC router, then hand finished. The support frame and washplane are packaged for shipment.

A4
Transport

This stage is relevant for the delivery of final product to the intended customers. Highway and seaway transportation are involved at this stage. Distances are provided by the manufacturer as average values.

System boundary

C1
Deconstruction and demolition

This stage includes the impacts during the dismantling of Aerofoil. Manual dismantling is assumed, thus no energy or additional material are required for the dismantling of the product.

C2
Transport

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

C3
Waste processing

This stage includes any waste processing related impact after the product reaches its end of life. It is assumed that no waste processing is needed in this stage.

C4
Disposal

It is assumed that the product is landfilled after reaching its end-of-life. Landfilling impacts are calculated at this stage.

D
Reuse, recycling, and recovery potential

Any reuse, recycling, recovery potential are considered in this stage. Since the product is assumed 100% landfilled, no benefit is allocated to this stage.

LCA information

Declared unit	1 kg of Aerofoil 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	Raw material transportation were weighted according to 2022 transportation 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)

	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**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Declared modules	X	X	X	X	ND	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X
Geography	UK	UK	UK	GLO	-	-	-	-	-	-	-	-	GLO	GLO	GLO	GLO	GLO
Specific data used	>90%					-											
Variation / products	<10%					-											
Variation / sites	0%					-											

X = Included in LCA, ND= Not declared

LCA results

Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
GWP / fossil	kg CO_2 eq	2.33E+01	4.56E-02	0.00E+00	5.08E-03	0.00E+00	5.88E-02	0.00E+00
GWP / biogenic	kg CO_2 eq	4.02E-02	6.05E-06	0.00E+00	1.93E-06	0.00E+00	6.78E-01	0.00E+00
GWP / luluc	kg CO_2 eq	2.46E-02	2.84E-05	0.00E+00	2.61E-06	0.00E+00	1.99E-05	0.00E+00
GWP / total	kg CO_2 eq	2.33E+01	4.57E-02	0.00E+00	5.08E-03	0.00E+00	7.37E-01	0.00E+00
ODP	kg CFC-11 eq	1.06E-06	7.40E-10	0.00E+00	8.64E-11	0.00E+00	3.49E-10	0.00E+00
AP	mol H+ eq	7.11E-02	6.46E-04	0.00E+00	1.39E-05	0.00E+00	1.62E-04	0.00E+00
EP / freshwater	kg P eq	2.46E-03	2.86E-06	0.00E+00	4.26E-07	0.00E+00	1.44E-05	0.00E+00
EP / marine	kg N eq	1.74E-02	1.62E-04	0.00E+00	3.66E-06	0.00E+00	1.82E-03	0.00E+00
EP / terrestrial	mol N eq	1.90E-01	1.78E-03	0.00E+00	3.79E-05	0.00E+00	4.68E-04	0.00E+00
POCP	kg NMVOC	5.95E-02	5.32E-04	0.00E+00	2.00E-05	0.00E+00	3.46E-04	0.00E+00
**ADPE	kg Sb eq	5.47E-05	9.26E-08	0.00E+00	1.42E-08	0.00E+00	5.87E-08	0.00E+00
**ADPF	MJ	5.65E+02	6.34E-01	0.00E+00	7.67E-02	0.00E+00	3.32E-01	0.00E+00
**WDP	m3 depriv.	1.52E+00	2.56E-03	0.00E+00	3.90E-04	0.00E+00	1.09E-02	0.00E+00
PM	disease inc.	5.36E-07	3.17E-09	0.00E+00	5.01E-10	0.00E+00	2.18E-09	0.00E+00
*IR	kBq U-235 eq	1.78E+01	4.79E-04	0.00E+00	7.03E-05	0.00E+00	1.21E-03	0.00E+00
**HTP / C	CTUh	8.54E-09	2.00E-11	0.00E+00	2.26E-12	0.00E+00	2.95E-11	0.00E+00
**HTP / NC	CTUh	1.73E-07	3.57E-10	0.00E+00	5.56E-11	0.00E+00	1.35E-09	0.00E+00
**SQP	Pt	2.27E+02	4.21E-01	0.00E+00	7.76E-02	0.00E+00	5.95E-01	0.00E+00

Acronyms	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-cancer human health effects, SQP: Land use related impacts, soil quality.
Legend	A1: Raw Material Supply, A2: Transport, A3: Manufacturing, A4: Transport, C1: Deconstruction / Demolition, C2: Transport, C3: Waste Processing, C4: Disposal, D: Benefits and Loads Beyond the System Boundary.
***Disclaimer 1**	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.
****Disclaimer 2**	The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator

Information on biogenic carbon content according to EN 15804+A2

Biogenic carbon content in product	kg C	1.30E-02
Biogenic carbon content in packaging	kg C	9.98E-03

Resource use

Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
PERE	MJ	1.16E+02	6.71E-03	0.00E+00	9.70E-04	0.00E+00	1.57E-02	0.00E+00
PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	1.16E+02	6.71E-03	0.00E+00	9.70E-04	0.00E+00	1.57E-02	0.00E+00
PENRE	MJ	5.65E+02	6.34E-01	0.00E+00	7.67E-02	0.00E+00	3.33E-01	0.00E+00
PENRM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	MJ	5.65E+02	6.34E-01	0.00E+00	7.67E-02	0.00E+00	3.33E-01	0.00E+00
SM	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m^3	1.41E-01	1.02E-04	0.00E+00	1.57E-05	0.00E+00	3.06E-04	0.00E+00

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	C1	C2	C3	C4	D
HWD	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NHWD	kg	5.70E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RWD	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CRU	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+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	0.00E+00
EE(Electrical)	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EE(Thermal)	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	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	C1	C2	C3	C4	D
*GWP-GHG	kg CO_2 eq	2.33E+01	4.57E-02	0.00E+00	5.09E-03	0.00E+00	5.74E-01	0.00E+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® System / The International EPD® System is a programme for type III environmental declarations. maintaining a system to verify and register EPD®s as well as keeping a library of EPD®s and PCRs in accordance with ISO 14025. www.environdec.com

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