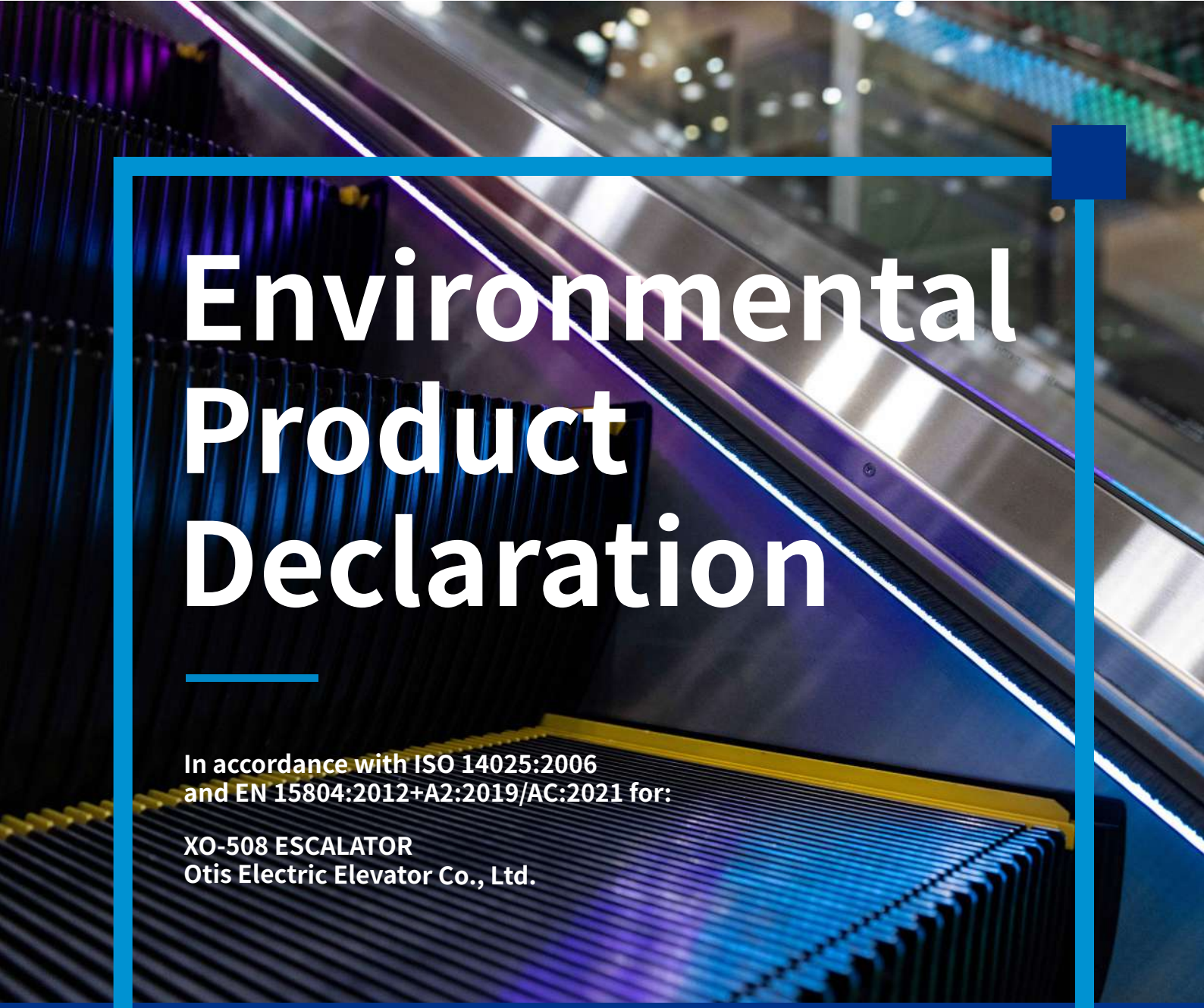


Environmental Product Declaration

In accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021 for:

XO-508 ESCALATOR
Otis Electric Elevator Co., Ltd.

Programme:	The International EPD® System, www.environdec.com
Programme operator:	EPD International AB
EPD registration number:	S-P-11418
Publication date:	2023-12-08
Valid until:	2028-12-08 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
Revision number:	0.0
Geographical scope:	China

EPD®

ECO PLATFORM EPD VERIFIED

OTIS electric

Company information

Description of the organisation

Otis Electric was established as a main subsidiary of Otis (NYSE:OTIS) in China on March 12, 1997 and is headquartered in Hangzhou. It provides elevators, escalators together with their service maintenance based on Otis' global technology platform and quality standards, for residential, commercial and urban modernization projects.

Otis Electric is supported by two manufacturing bases in Hangzhou and Chongqing, and has a laboratory accredited by China National Accreditation Service for Conformity Assessment(CNAS). Its 4,000 mechanics collaborate on a dedicated team of 7,000 employees at more than 360 branches and service outlets nationwide to move forward together with passengers and customers.

Factory information

Otis' sustainability and environmental strategy has led to increasing energy-efficiency of escalators and moving walks as well as the production and assembly of escalators and moving walks. We are committed to continuously improving and enhancing our environmental indicators at our manufacturing facilities in China.

OE escalator factory, located in Hangzhou, has passed ISO9001, ISO14001, ISO 45001, ISO50001 certification and the certification of design, manufacturing and sales of escalators and moving walks. It’ s also certified to provide installation, maintenance and other related services.

We have established and maintained the operation of occupational health and safety management, quality management system and environmental management system. We have been monitoring the end-of-line disposal of recyclable, non-recyclable, and hazardous waste. Under the supervision of the ISO50001 energy management system, our factory has been strictly controlling the use of water and electricity, reducing greenhouse gas emissions. Following the "Otis GS193 global standard", we plan to achieve carbon neutrality in the factory's electricity consumption by 2030.

We are also reducing our waste emissions by removing and recycling the packaging of parts and backfilling some recyclable packaging materials to gradually reach the goal of zero-landfill. It is planned to achieve ZWTL (Zero Waste To Landfill) certification by 2025.

In line with the United Nations’ and China's Sustainable Development Goals, we will achieve zero carbon emissions from electricity consumption at our factories by 2030 and reduce CO^2 by an estimated 3,000 tons (compared to 2021).

Our government and major customers care about how escalators and moving walks are manufactured, and are increasingly focusing on energy enhancement and environmental protection. Through ISO50001, we can continuously reduce energy consumption in our in-house manufacturing processes and support our energy efficiency in our operations.

The implementation of this standard helps us protect our employees from possible occupational risks, reduce the likelihood of accidents in the workplace, while improving the safety performance of our products and protecting all equipment.

General information

EPD Owner

Otis Electric Elevator Co., Ltd.

No.28 Jiuhuan Road, Shangcheng District, Hangzhou City, Zhejiang Province

Programme Operator

EPD International AB

Box 210 60

SE-100 31 Stockholm Sweden

info@environdec.com

Product Category Rules (PCR)

CEN standard EN 15804 serves as the Core Product Category Rules (PCR)

Product Category Rules (PCR): <Escalators and moving walks, c-PCR-025 (2023-06-12), UN CPC 4354 Lifts, skip hoists, escalators and moving walkways >

PCR review was conducted by: < Hüdai Kara, reviewed by the Technical Committee of the International EPD® System. A full list of members is available at www.environdec.com. The review panel may be contacted via info@environdec.com. >

Life Cycle Assessment (LCA)

LCA accountability: <Jean Yang, Eric Ma, SGS-CSTC Standards Technical Services Co., Ltd.>

Third-party verification

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

■ EPD verification by individual verifier

Third-party verifier: <Bill Kung, Ecovane Environmental>

Approved by: The International EPD® System

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

☐ Yes ■ No

[Procedure for follow-up the validity of the EPD is at minimum required once a year with the aim of confirming whether the information in the EPD remains valid or if the EPD needs to be updated during its validity period. The follow-up can be organized entirely by the EPD owner or together with the original verifier via an agreement between the two parties. In both approaches, the EPD owner is responsible for the procedure being carried out. If a change that requires an update is identified, the EPD shall be re-verified by a verifier]

The EPD owner has the sole ownership, liability, and responsibility for the EPD.

EPDs within the same product category but registered in different EPD programmes, or not compliant with EN 15804, 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. For further information about comparability, see EN 15804 and ISO 14025.

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

Noted that it is not encouraged to use the results from modules A1-A3 solely without considering the results of module B and C as escalator is a product which comsume large quantity of energy and have significant impact in the end of life stage. The data collected from Tier 1 suppliers are selectively reviewed to the best of our knowledge, which may have chance to be improved in the future EPD work.

Product information

Product name:
XO-508 ESCALATOR
Product identification:
The escalators are compliant with required Codes and Standards

Otis Electric XO-508 escalators are safe, reliable and fashionable. Our premium product solutions complement your architecture and design. Whether you' re welcoming guests into an upscale shopping mall or audiences to a grand exhibition center, XO-508 escalators always give you the comfortable experience.
Moreover, we focus on delivering a more sustainable experience. We have applied innovative thinking every step of the way – from design and manufacturing to installation and throughout the product lifecycle: energy efficient with sleep mode and Otis ReGen™ drive, efficient smart lubrification system, use of recyclable materials for manufacturing and exposed finishes made of extremely durable stainless steel or non-toxic powder coating for carbon steel.

UN CPC code: 4354

Geographical scope:

XO-508 ESCALATOR is manufactured in China and to be distributed and used in China.

The following tables depict the technical specifications for the considered XO-508 escalator and other additional specifications. The figures correspond to a typical configuration, being the representative unit of the complete range of the XO-508 escalator:

Characteristic	Range	Representative Values
Type of installation	Escalator	
Type of configuration	new generic installation without modernization	
Commercial name	XO-508	
Recommended application (main market)	Commercial	
Geographic region of intended installation	China	
Optional equipment	/	
Designed Reference Service Life (RSL)	20 years	
Applied Usage Class (UC)	1,2,3,4	2
Nominal speed	0.5 m/s	
Number of operating days per year	365	
Operation mode	Auto start, Slow-speed, Continuous	Auto start
Angle of inclination, α	30°/35°	30°
Vertical rise	up to 13m	
Step width	600/800/1000	1000 mm

LCA information

Functional unit / declared unit:

According to C-PCR-025 (TO PCR 2019:14) for ESCALATORS AND MOVING WALKS , the FU is defined as the transportation of one passenger over one kilometre, i.e., passenger-kilometre [pkm] over an inclined (or horizontal) trajectory. Declared unit is one single unit of XO-508 escalator.

Reference service life: 20 years

Time representativeness: January to December 2022

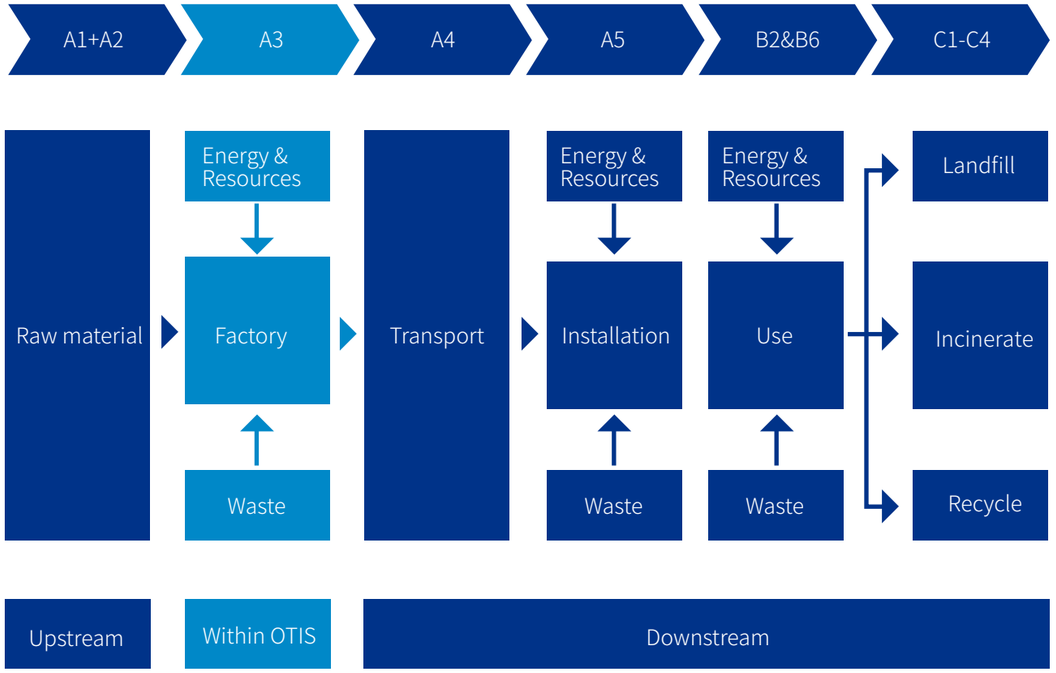
Database(s) and LCA software used:

In the study, SimaPro 9.5 software were used to establish the model for the life cycle of products and calculate LCA results, datasets from the Ecoinvent 3.9 were used.

Description of system boundaries:

The system boundary covers cradle to grave and module D (A + B + C + D). in accordance with PCR.

System diagram:



Modules declared, geographical scope, share of specific data (in GWP-GHG results) and data variation (in GWP-GHG results):

		Module	Modules declared	Geography	Specific data used	Variation – products	Variation – sites
Product stage	Raw material supply	A1	√	CN	>90%	/	/
	Transport	A2	√	CN	>90%	/	/
	Manufacturing	A3	√	CN	>90%	/	/
Construction process stage	Transport	A4	√	CN	>90%	-	-
	Construction installation	A5	√	CN	>90%	-	-
Use stage	Use	B1	×	CN	-	-	-
	Maintenance	B2	√	CN	-	-	-
	Repair	B3	×	CN	-	-	-
	Replacement	B4	×	CN	-	-	-
	Refurbishment	B5	×	CN	-	-	-
	Operational energy use	B6	√	CN	-	-	-
	Operational water use	B7	×	CN	-	-	-
End of life stage	De-construction demolition	C1	√	CN	-	-	-
	Transport	C2	√	CN	-	-	-
	Waste processing	C3	√	CN	-	-	-
	Disposal	C4	√	CN	-	-	-
Resource recovery stage	Reuse-Recovery-Recycling-potential	D	√	CN	-	-	-

Allocation Rules

The energy and resources usage per unit of the product in the production stage of the product is calculated by dividing the annual energy or resource consumption by the total output of the company' s product, that is, the physical allocation method is used for allocation.
In addition, the default distribution rule for the environmental impacts and benefits of reuse, recovery and/or recycling is based on the polluter pays principle (PPP), which means that the recovery or reuse beneficiary bears the environmental impacts and benefits associated with the recovery or reuse treatment, and the original product manufacturer does not have to bear this part of the impact burden. It also does not participate in the sharing of benefits (environmental impact of the production of the same product avoided by recycling and reuse).

Cut-off Criteria

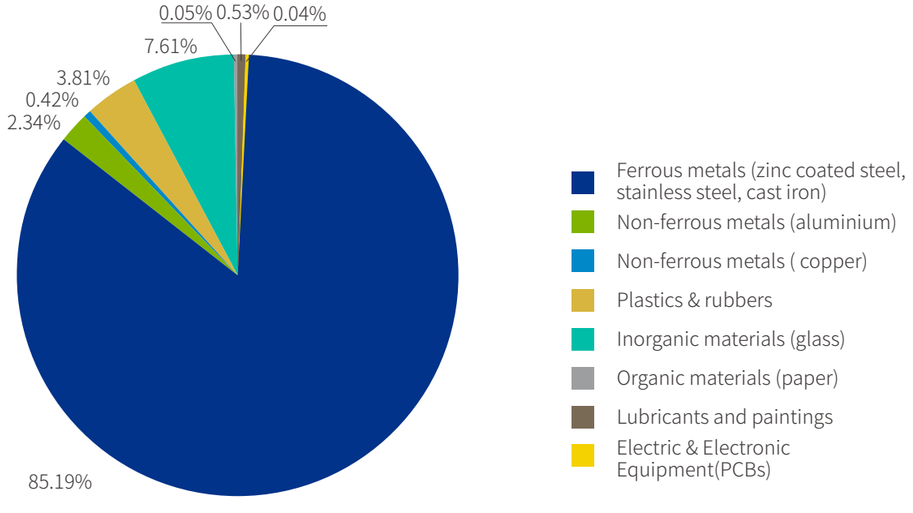
According to EN 15804 and C-PCR-025 (TO PCR 2019:14) for ESCALATORS AND MOVING WALKS, the following flows and operations are cut-offed:
Production, use and disposal of the packaging of components and semi-finished intermediates.
Material and energy flows related to dismantling phase which is performed by adopting manual tools (e.g. screwdrivers, hammers, etc.).

Relevant Assumptions

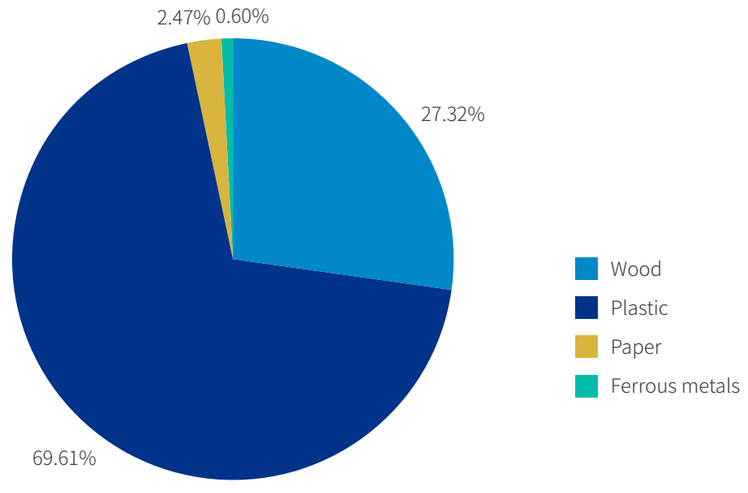
The following assumptions are used in this assessment:
Distance of transportation is assumed using online map, transport inland is assumed via 32-ton truck. It is assumed that same amount of energy and resource were used and waste were produced to manufacture, install and disassemble each unit of escalator.
The product is expected to be used globally, expected energy consumption of the escalator is calculated according to Annex A of ISO 25745-3.
End of life treatment method and ratio is assumed in acordance with expertise judgement from OTIS and IEC TR 62635-2012.
5% of raw material loss was considered in accordance with PCR.
It is assumed in accordance with IEC TR 62635-2012, a recycling rate of 90% for escalators. Which means 90% of escalators were sorted and potentially recycled while the rest 10% were disposed as whole directly. After all the waste materials has been separated and sorted, steel and copper are recycled at a rate of 95% in accordance with IEC TR 62635-2012, others were not recycled but either landfilled or incinerated.

Content information

Product components	Weight (kg)	Weight (%)	Biogenic carbon
Ferrous metals (zinc coated steel, stainless steel, cast iron)	5196.00	85.19	/
Non-ferrous metals (aluminium)	142.73	2.34	/
Non-ferrous metals (copper)	25.83	0.42	/
Plastics & rubbers	232.67	3.81	/
Inorganic materials (glass)	463.98	7.61	/
Organic materials (paper)	3.21	0.05	0.45 kg C/kg
Lubricants and paintings	32.6	0.53	/
Electric & Electronic Equipment(PCBs)	2.64	0.04	/
TOTAL	6099.66	100.00	/



Packaging materials	Weight (kg)	Weight (%)	Biogenic carbon
Wood	18.26	27.32	0.50 kg C/kg
Plastic	46.52	69.61	/
Paper	1.65	2.47	0.45 kg C/kg
Ferrous metals	0.40	0.60	/
TOTAL	66.82	100	/



Dangerous substances from the candidate list of SVHC for Authorisation	EC No.	CAS No.	Weight-% per functional or declared unit
NA	/	/	/

Results of the environmental performance indicators

Mandatory impact category indicators according to EN 15804

Results per functional unit											
Indicator	Unit	A1-A3	A4	A5	B2	B6	C1	C2	C3	C4	D
GWP-fossil	kg CO_2 eq.	4.37E-02	2.75E-03	4.54E-04	3.10E-03	3.58E-01	1.36E-05	1.42E-03	6.77E-04	1.23E-03	-2.29E-02
GWP-biogenic	kg CO_2 eq.	-5.60E-04	8.08E-07	5.93E-04	3.35E-06	6.28E-05	2.37E-09	4.18E-07	1.81E-06	3.28E-05	-1.10E-05
GWP-luluc	kg CO_2 eq.	4.07E-05	1.32E-06	7.04E-08	1.89E-06	1.41E-04	5.34E-09	6.85E-07	1.35E-06	2.18E-08	-1.28E-05
GWP-total	kg CO_2 eq.	4.32E-02	2.75E-03	1.05E-03	3.11E-03	3.59E-01	1.36E-05	1.42E-03	6.80E-04	1.26E-03	-2.30E-02
ODP	kg CFC 11 eq.	8.60E-10	4.21E-11	3.66E-12	4.79E-11	7.28E-10	2.75E-14	2.18E-11	4.72E-12	1.65E-12	-8.01E-10
AP	mol H^+ eq.	2.51E-04	9.73E-06	1.63E-06	1.06E-05	1.91E-03	7.22E-08	5.03E-06	3.66E-06	4.54E-07	-1.27E-04
EP-freshwater	kg P eq.	2.14E-06	2.52E-08	2.21E-09	6.88E-08	7.70E-06	2.91E-10	1.30E-08	3.40E-08	4.85E-10	-9.09E-07
EP-marine	kg N eq.	4.21E-05	3.20E-06	6.74E-07	2.04E-06	3.80E-04	1.44E-08	1.65E-06	6.11E-07	2.08E-07	-2.08E-05
EP-terrestrial	mol N eq.	4.72E-04	3.43E-05	7.30E-06	2.18E-05	4.19E-03	1.58E-07	1.78E-05	7.25E-06	2.18E-06	-2.39E-04
POCP	kg NMVOC eq.	1.84E-04	1.38E-05	2.34E-06	1.80E-05	1.11E-03	4.20E-08	7.15E-06	2.04E-06	8.19E-07	-9.72E-05
ADP-minerals&metals*	kg Sb eq.	1.50E-06	7.27E-09	4.23E-10	1.76E-08	1.41E-06	5.35E-11	3.76E-09	6.10E-09	5.31E-11	-3.73E-07
ADP-fossil*	MJ	4.67E-01	3.92E-02	3.15E-03	5.61E-02	3.37E+00	1.28E-04	2.03E-02	8.45E-03	5.93E-04	-1.97E-01
WDP*	m^3	8.53E-03	2.00E-04	2.31E-05	6.60E-04	4.01E-02	1.51E-06	1.03E-04	1.17E-04	6.49E-05	-2.07E-03
GWP-GHG	kg CO_2 eq.	4.38E-02	2.75E-03	4.54E-04	3.11E-03	3.59E-01	1.36E-05	1.42E-03	6.80E-04	1.24E-03	-2.30E-02
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption										

* Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.

Resource use indicators

Results per functional unit											
Indicator	Unit	A1-A3	A4	A5	B2	B6	C1	C2	C3	C4	D
PERE	MJ	4.35E-02	4.95E-04	6.82E-05	2.51E-03	4.05E-01	1.53E-05	2.56E-04	1.13E-03	1.51E-05	-7.98E-03
PERM	MJ	8.52E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	4.44E-02	4.95E-04	6.82E-05	2.51E-03	4.05E-01	1.53E-05	2.56E-04	1.13E-03	1.51E-05	-7.98E-03
PENRE	MJ	4.55E-01	3.92E-02	3.16E-03	4.45E-02	3.37E+00	1.28E-04	2.03E-02	8.45E-03	6.29E-04	-1.98E-01
PENRM	MJ	2.09E-02	0.00E+00	0.00E+00	1.25E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	MJ	4.76E-01	3.92E-02	3.16E-03	5.70E-02	3.37E+00	1.28E-04	2.03E-02	8.45E-03	6.29E-04	-1.98E-01
SM	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	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	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	0.00E+00	0.00E+00	0.00E+00
FW	m^3	2.72E-04	6.15E-06	7.49E-07	1.95E-05	9.72E-04	3.68E-08	3.18E-06	4.66E-06	2.01E-06	-6.66E-05
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy 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 re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water										

Waste indicators

Results per functional unit											
Indicator	Unit	A1-A3	A4	A5	B2	B6	C1	C2	C3	C4	D
Hazardous waste disposed	kg	0.00E+00	0.00E+00	0.00E+00	3.31E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.12E-04	0.00E+00
Non-hazardous waste disposed	kg	0.00E+00	0.00E+00	1.45E-04	1.81E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.71E-03	0.00E+00
Radioactive waste disposed	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	0.00E+00	0.00E+00

Output flow indicators

Results per functional unit											
Indicator	Unit	A1-A3	A4	A5	B2	B6	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	0.00E+00	0.00E+00
Material for recycling	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	0.00E+00	9.97E-03
Materials for energy recovery	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	0.00E+00	0.00E+00
Exported energy, electricity	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	0.00E+00	0.00E+00
Exported energy, thermal	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	0.00E+00	0.00E+00

Additional environmental information

To demonstrate the full life cycle potential environmental impact of each escalator, LCIA results per declared unit are shown in table below in this section.

Impact category indicators per declared unit

Results per declared unit											
Indicator	Unit	A1-A3	A4	A5	B2	B6	C1	C2	C3	C4	D
GWP-fossil	kg CO_2 eq.	2.01E+04	1.26E+03	2.09E+02	1.43E+03	1.65E+05	6.23E+00	6.53E+02	3.11E+02	5.66E+02	-1.05E+04
GWP-biogenic	kg CO_2 eq.	-2.57E+02	3.72E-01	2.73E+02	1.54E+00	2.89E+01	1.09E-03	1.92E-01	8.33E-01	1.51E+01	-5.06E+00
GWP-luluc	kg CO_2 eq.	1.87E+01	6.09E-01	3.24E-02	8.70E-01	6.50E+01	2.46E-03	3.15E-01	6.22E-01	1.00E-02	-5.88E+00
GWP-total	kg CO_2 eq.	1.99E+04	1.26E+03	4.82E+02	1.43E+03	1.65E+05	6.24E+00	6.54E+02	3.13E+02	5.81E+02	-1.06E+04
ODP	kg CFC 11 eq.	3.96E-04	1.94E-05	1.68E-06	2.20E-05	3.35E-04	1.27E-08	1.00E-05	2.17E-06	7.59E-07	-3.68E-04
AP	mol H^+ eq.	1.16E+02	4.48E+00	7.50E-01	4.88E+00	8.78E+02	3.32E-02	2.31E+00	1.68E+00	2.09E-01	-5.85E+01
EP-freshwater	kg P eq.	9.83E-01	1.16E-02	1.02E-03	3.16E-02	3.54E+00	1.34E-04	6.00E-03	1.56E-02	2.23E-04	-4.18E-01
EP-marine	kg N eq.	1.94E+01	1.47E+00	3.10E-01	9.40E-01	1.75E+02	6.60E-03	7.61E-01	2.81E-01	9.55E-02	-9.55E+00
EP-terrestrial	mol N eq.	2.17E+02	1.58E+01	3.36E+00	1.00E+01	1.93E+03	7.28E-02	8.17E+00	3.33E+00	1.00E+00	-1.10E+02
POCP	kgNMVOC eq.	8.46E+01	6.36E+00	1.08E+00	8.29E+00	5.10E+02	1.93E-02	3.29E+00	9.40E-01	3.77E-01	-4.47E+01
ADP-minerals&metals*	kg Sb eq.	6.92E-01	3.34E-03	1.95E-04	8.09E-03	6.51E-01	2.46E-05	1.73E-03	2.81E-03	2.44E-05	-1.72E-01
ADP-fossil*	MJ	2.15E+05	1.80E+04	1.45E+03	2.58E+04	1.55E+06	5.86E+01	9.32E+03	3.89E+03	2.73E+02	-9.07E+04
WDP*	m^3	3.92E+03	9.19E+01	1.06E+01	3.03E+02	1.84E+04	6.97E-01	4.75E+01	5.37E+01	2.98E+01	-9.51E+02
GWP-GHG	kg CO_2 eq.	2.01E+04	1.26E+03	2.09E+02	1.43E+03	1.65E+05	6.24E+00	6.54E+02	3.13E+02	5.70E+02	-1.06E+04
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption										

Resource use indicators per declared unit

Results per declared unit											
Indicator	Unit	A1-A3	A4	A5	B2	B6	C1	C2	C3	C4	D
PERE	MJ	2.00E+04	2.28E+02	3.13E+01	1.15E+03	1.86E+05	7.04E+00	1.18E+02	5.21E+02	6.93E+00	-3.67E+03
PERM	MJ	3.92E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	2.04E+04	2.28E+02	3.13E+01	1.15E+03	1.86E+05	7.04E+00	1.18E+02	5.21E+02	6.93E+00	-3.67E+03
PENRE	MJ	2.09E+05	1.80E+04	1.45E+03	2.05E+04	1.55E+06	5.86E+01	9.32E+03	3.89E+03	2.89E+02	-9.10E+04
PENRM	MJ	9.62E+03	0.00E+00	0.00E+00	5.74E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	MJ	2.19E+05	1.80E+04	1.45E+03	2.62E+04	1.55E+06	5.86E+01	9.32E+03	3.89E+03	2.89E+02	-9.10E+04
SM	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	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	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	0.00E+00	0.00E+00	0.00E+00
FW	m^3	1.25E+02	2.83E+00	3.44E-01	8.98E+00	4.47E+02	1.69E-02	1.46E+00	2.14E+00	9.25E-01	-3.06E+01
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy 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 re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water										

Waste indicators per declared unit

Results per declared unit											
Indicator	Unit	A1-A3	A4	A5	B2	B6	C1	C2	C3	C4	D
Hazardous waste disposed	kg	0.00E+00	0.00E+00	0.00E+00	1.52E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.35E+02	0.00E+00
Non-hazardous waste disposed	kg	0.00E+00	0.00E+00	6.68E+01	8.34E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.24E+03	0.00E+00
Radioactive waste disposed	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	0.00E+00	0.00E+00

Output flow indicators per declared unit

Results per declared unit											
Indicator	Unit	A1-A3	A4	A5	B2	B6	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	0.00E+00	0.00E+00
Material for recycling	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	0.00E+00	4.59E+03
Materials for energy recovery	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	0.00E+00	0.00E+00
Exported energy, electricity	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	0.00E+00	0.00E+00
Exported energy, thermal	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	0.00E+00	0.00E+00

References

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

ISO 14040:2006
Environmental management — Life cycle assessment — Requirements and guidelines

ISO 14044:2006
Environmental management — Life cycle assessment — Principles and framework

PCR 2019:14
CONSTRUCTION PRODUCTS

C-PCR-025
(TO PCR 2019:14) for ESCALATORS AND MOVING WALKS (2023-06-12)

IEC TR 62635-2012
Guidelines for end-of-life information provided by manufacturers and recyclers and for recyclability rate calculation of electrical and electronic equipment

EN 15804:2012+A2:2019
Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products

ISO 25745-3:2015
Energy performance of lifts, escalators and moving walks —Part 3: Energy calculation and classification of escalators and moving walks

Glossary

ENVIRONMENTAL PRODUCT DECLARATION (EPD)
An EPD is a type III declaration, complying with ISO14025, which provides results about a product' s environmental performance and facilitates comparison between different products with the same function (Functional Unit and escalator characteristics). The results are based on the Life Cycle Analysis done in accordance with ISO 14040.

LIFE CYCLE ASSESSMENT (LCA)
LCA is a method that quantifies the total environment impact of products or activities over their entire life cycle and life cycle thinking. Life cycle assessment is based on ISO 14040 and ISO 14044 standards and comprises four phases: goal and scope definition, inventory data collection and analysis, environmental impact assessment, and interpretation of results. The results of LCA are used in communication and product development purposes, for example.

LIFE CYCLE IMPACT ASSESSMENT (LCIA)
The phase of life cycle assessment aimed at understanding and evaluating the magnitude and significance of the potential environmental impacts of a product system throughout the life cycle of the product.

GLOBAL WARMING POTENTIAL (GWP)
It is expressed in kg carbon dioxide (CO_2) equivalent. This indicator expresses global warming potential and refers to carbon footprint. It considers gaseous substances such as carbon dioxide (CO_2), methane (CH_4), laughing gas (N_2O) over 100 years. These substances have an ability to absorb infrared radiation in the earth' s atmosphere. They let sunlight reach the earth' s surface and trap some of the infrared radiation emitted back into space causing an increase in the earth' s surface temperature.

LIFE CYCLE INVENTORY (LCI)
The phase of life cycle assessment involving the compilation and quantification of inputs and outputs for a product system throughout its life cycle.

FUNCTIONAL UNIT (FU)
The quantified performance of a product system for use, as a reference unit.

PRODUCT CATEGORY RULES (PCR)
Product Category Rules (PCR) defines the rules and requirements for EPDs of a certain product category. They are a key part of ISO 14025 as they enable transparency and comparability between EPDs.

EPD®

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