

ENVIRONMENTAL PRODUCT DECLARATION

in accordance with ISO 14025 for:

Programme: The International EPD System (www.environdec.com)

Programme operator: EPD International AB

PCR "Seats" 2009:02 - Version 2.0 - UN CPC 3811

EPD registration number: S-P-01628

Publication date: 2019/09/30

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THE INTERNATIONAL EPD® SYSTEM

SIÉNTEME armchair
SUTEGA



PROGRAMME and VERIFICATION INFORMATION

Programme:	The International EPD® System EPD International AB Box 210 60 SE-100 31 Stockholm Sweden www.environdec.com info@environdec.com
Product Category Rules:	PCR "Seats" 2009:02 - Version 2.0 – PCR review conducted by Leo Breedveld, available on the website of the International EPD Consortium (IEC): www.environdec.com
Product group classification:	UN CPC 3811
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Independent third-party verification of the declaration and data, according to ISO 14025:2006:	<div> <div>EPD process certification</div> <div>✓ EPD verification</div> </div>
Certification Body	TECNALIA R&I CERTIFICACION, S.L. Accredited by: ENAC nº125/C-PR283 accreditation Auditor: eli.amat@tecnaliacertificacion.com
Procedure for follow-up of data during EPD validity involves third party verifier:	<div>Yes</div> <div>✓ No</div>

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The company

The company Suministros Técnicos Galicia S.L. (SUTEGA), offers personalized and flexible solutions through custom furnishings, counting with its own factory which is a specialized carpentry in projects made-to-measure.

Its clients are companies and entities developing their activity in sectors such as hospitality and restaurants, offices, retail, education, auditoriums and geriatrics. SUTEGA is a reference in the design and execution of equipment projects.

The company is headquartered in Galicia, having offices in Vigo and A Coruña and a working center in Madrid. At international level, Mexico and USA count with permanent delegations. Its factory is located in A Estrada (A Coruña). At logistic level, its warehouses are located in Madrid and Galicia.

SUTEGA is committed to technological and environmental innovation in all the products developed, aiming at maximizing the experience of its customers and users. In order to ensure the environmental and quality requirements, SUTEGA has implemented since 2013 a Quality Management System based on ISO 9001:2015 and an Environmental Management System based on ISO 14001:2015. In addition, ratifying its commitment to the environmental improvement of its products, since 2018 it has had an FSC® Chain of Custody Management certificate for the marketing of office furniture, interior and construction wood.

According to internal policy related to environmental improvement in all its products, this armchair has been designed through implementation of ecodesign strategies and principles. Results have been analyzed through a LCA – Life Cycle Assessment – establishing the basis for the development of the present EPD. This ecolabel reflects SUTEGA's commitment to and excellence in environmental matters.

The product



The Siénteme armchair develops a new concept of armchair for geriatrics, based on two basic pillars: technological innovation and environmental improvement. Technological innovation comes from two clearly differentiated and absolutely complementary paths: the spacers and the mechanical advantages related to the industrial design of the armchair. On the environmental side, the objective has been to develop an EPD to unequivocally communicate the company's commitment in environmental matters. Nowadays, the industrial design is in the patent process.

The present armchair is designed for being used in geriatrics, complying with the legislation and regulations applicable to this type of center, with high demands in terms of fire protection, durability and antibacterial performances, and highlighting in functionality and aesthetics.

The armchair is designed for use by patients as well as by healthcare personnel and companions, including a mechanism to recline completely until a lying position. All components have been designed using ecodesign principles that maximize the repairability and recyclability of their components.

SUTEGA has subcontracted the design of the Siénteme armchair and the technical coordination of the manufacturing process to the company UMANA.



DESIGN MATERIALS	RECYCLED MATERIAL		RAW MATERIAL		TOTAL MATERIALS	
	Quantity (kg)	% Weight	Quantity (kg)	% Weight	Quantity (kg)	% Weight
Wooden pieces	0,00	0,0%	13,71	61,2%	13,71	61,2%
Metal pieces	3,07	13,7%	3,17	14,1%	6,24	27,8%
Commercial Components	0,37	1,7%	0,56	2,5%	0,93	4,1%
Spacers	0,00	0,0%	1,19	5,3%	1,19	5,3%
Textiles	0,00	0,0%	0,35	1,6%	0,35	1,6%
TOTAL	3,44	15,4%	18,97	84,6%	22,41	100,0%

PACKAGING MATERIALS	RECYCLED MATERIAL		RAW MATERIAL		TOTAL MATERIALS	
	Quantity (kg)	% Weight	Quantity (kg)	% Weight	Quantity (kg)	% Weight
Cardboard	1,11	100,0%	0,00	0,0%	1,11	100,0%
Paper	0,00	0,0%	0,00	0,0%	0,00	0,0%
Plastic	0,00	0,0%	0,00	0,0%	0,00	0,0%
TOTAL	1,11	100,0%	0,00	0,0%	1,11	100,0%

Neither the product nor the packaging contains any substance from the REACH candidate list.

LCA information

Declared unit

The functional unit consists of a reclining armchair operating for 15 years of useful life, including primary and secondary packaging and all those operations and products associated with its maintenance during that time.

System boundaries

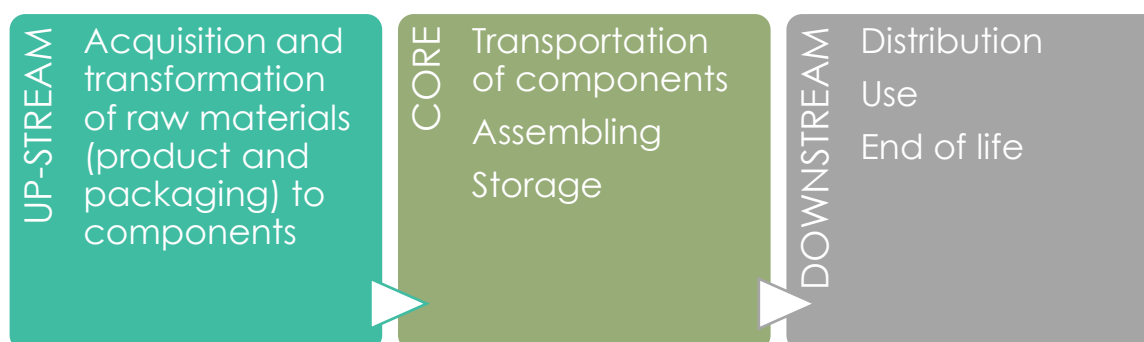
The scope of the system is "Cradle to grave", including the entire life cycle of the product: from obtaining raw materials, manufacturing, use and end of life.

The limits of the system have been divided into three modules and have been assessed in depth through the LCA that feeds this EPD. SUTEGA is not directly manufacturing the seats, but rather manages their design, sale and assembly.

In the UPSTREAM module, all the processes related to the extraction of raw materials and their transport to the plants where they have been transformed into main components have been included.

The CORE module includes the process of assembling the armchair, its intermediate storage and the packaging used for transporting and storing each armchair.

In the DOWNSTREAM module, all the processes related to the distribution from the storage to the final customer, the use and maintenance phase of the armchair and its end of life have been included. Including both of the armchair itself and of its packaging.



Exclusions

Data and processes associated with infrastructure and machinery manufacturing, construction of buildings and capital goods used for the production of armchairs have been excluded from the assessment, both in the associated LCA and in this EPD. It also excludes transport used by personnel and associated business trips and all activities relating to research and development R+D.

Boundaries in time

The data provided correspond to a period of 3 months of production (first quarter of 2019) as it is a new construction facility.

Boundaries towards geography

The main supplier is Portuguese, so the components are manufactured in plants close to it (radius of 100km). The storage prior distribution to the customer is done in A Coruña or Madrid, in addition to minimum quantities collected in the factory itself in Portugal.

Main hypotheses

- Distribution to the end-user has been assumed in a scenario of 600 km distance between the logistics warehouse and the end-user.
- It has been assumed that cleaning of the armchair is done only with soap and water and that it will not suffer repairs in 15 years of useful life.
- Thanks to its simple and functional design that allows easy disassembly in mono materials, it is assumed that at the end of the useful life of the armchair, it will be treated according to: recycling of metal parts, wood and cardboard packaging, landfill for spacers and fabrics.

Allocation rules

In the present study has been considered necessary to make a physical allocation (depending on the units produced) for the consumption of electricity, the waste produced and the consumption of glues and varnishes.

Cut-off rules

The packaging of commercial elements has been left out of the study, as they are materials whose impact represents less than 1%. The rest of the primary Upstream and Core data (materials and energy consumption provided by Sutega and its suppliers) have been included. In the case of the Downstream

module, no cut-off criteria are applied as it is a stage modeled with theoretical scenarios.

Data quality rules

Primary data have been used for the main components and materials of the study, through the different suppliers of SUTEGA.

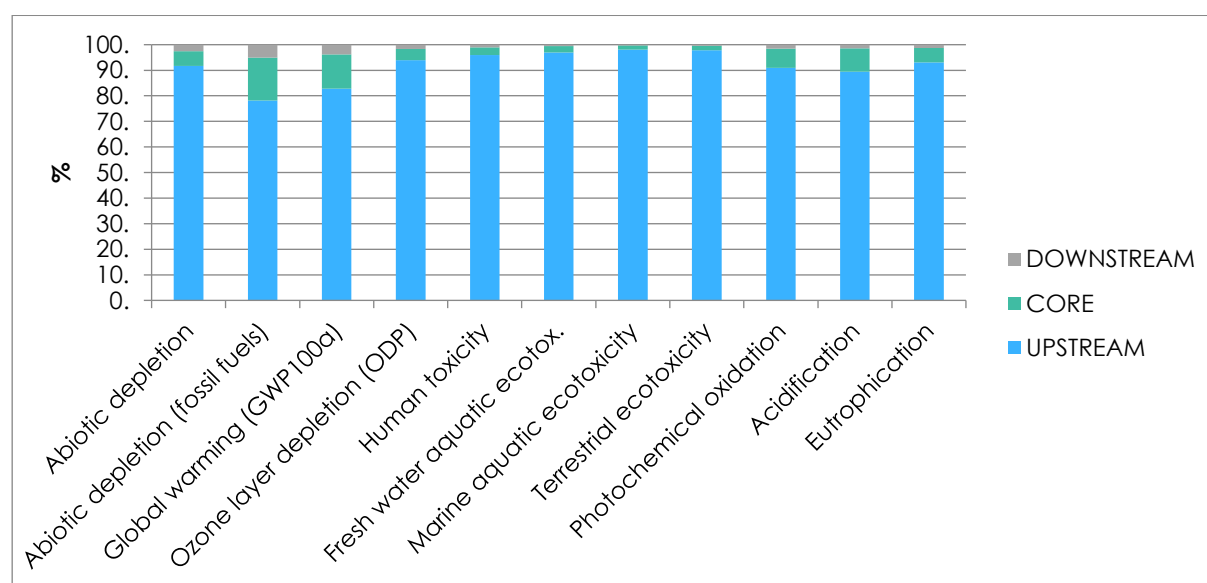
The secondary data come from the Ecoinvent 3.3 database and with Simapro 8.2 software.

Environmental indicators

The environmental performance of a reclining armchair for 15 years of useful life has been calculated according to CML-IA V4.8 August 2016 methodology.

Potential environmental impacts

Potential environmental impacts	Units	TOTAL	UPSTREAM	CORE	DOWNSTREAM
GWP – Global warming potential	kg CO ₂ eq	1,03E+02	8,54E+01	1,38E+01	3,93E+00
AP – Acidification potential	kg SO ₂ eq	7,02E-01	6,27E-01	6,39E-02	1,04E-02
POCP - Ozone-creating potential	kg C ₂ H ₄ eq	4,06E-02	3,69E-02	3,05E-03	6,34E-04
Ep – Eutrophication potential	kg PO ₄ ³⁻	1,61E-01	1,49E-01	9,12E-03	1,98E-03
Human Toxicity	CTUh	7,23E-05	6,76E-05	3,46E-06	1,30E-06
Ecotoxicity	CTUe	1,74E+03	1,64E+03	8,23E+01	2,49E+01
Land Use	species.yr	8,03E-07	7,73E-07	2,23E-08	7,46E-09

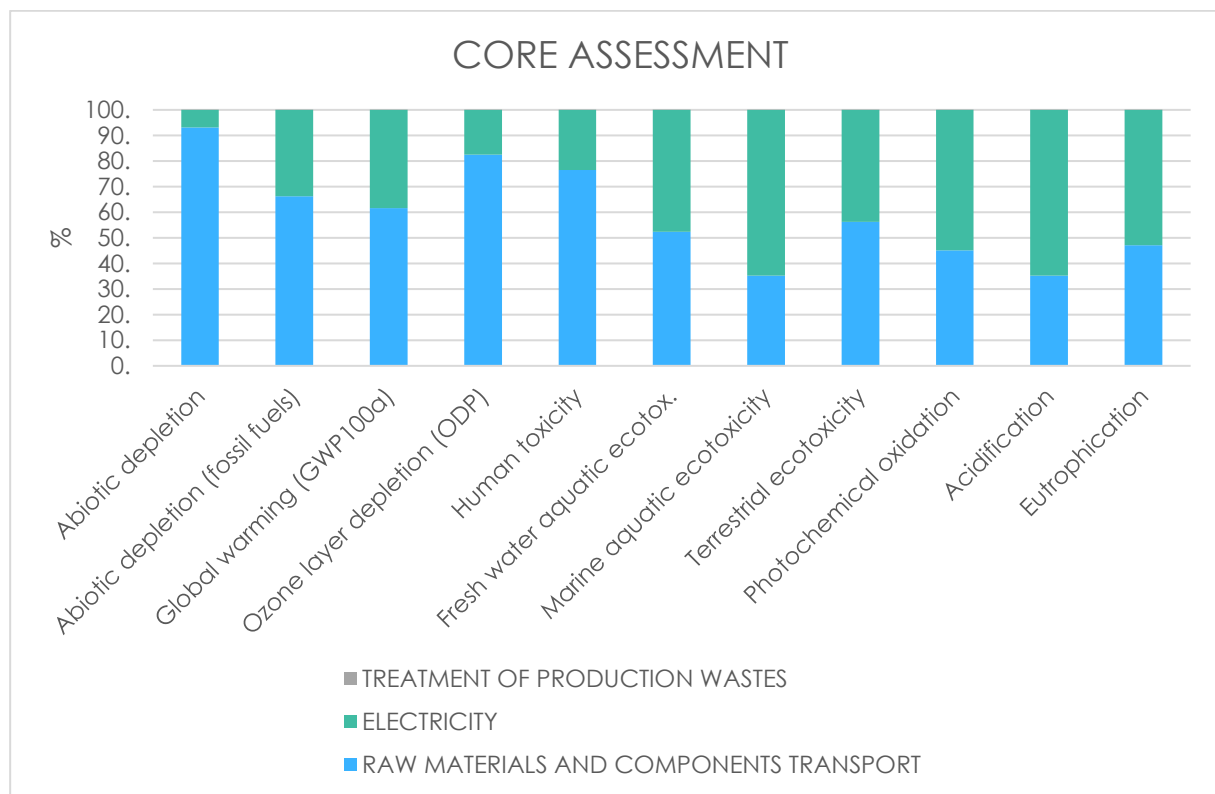
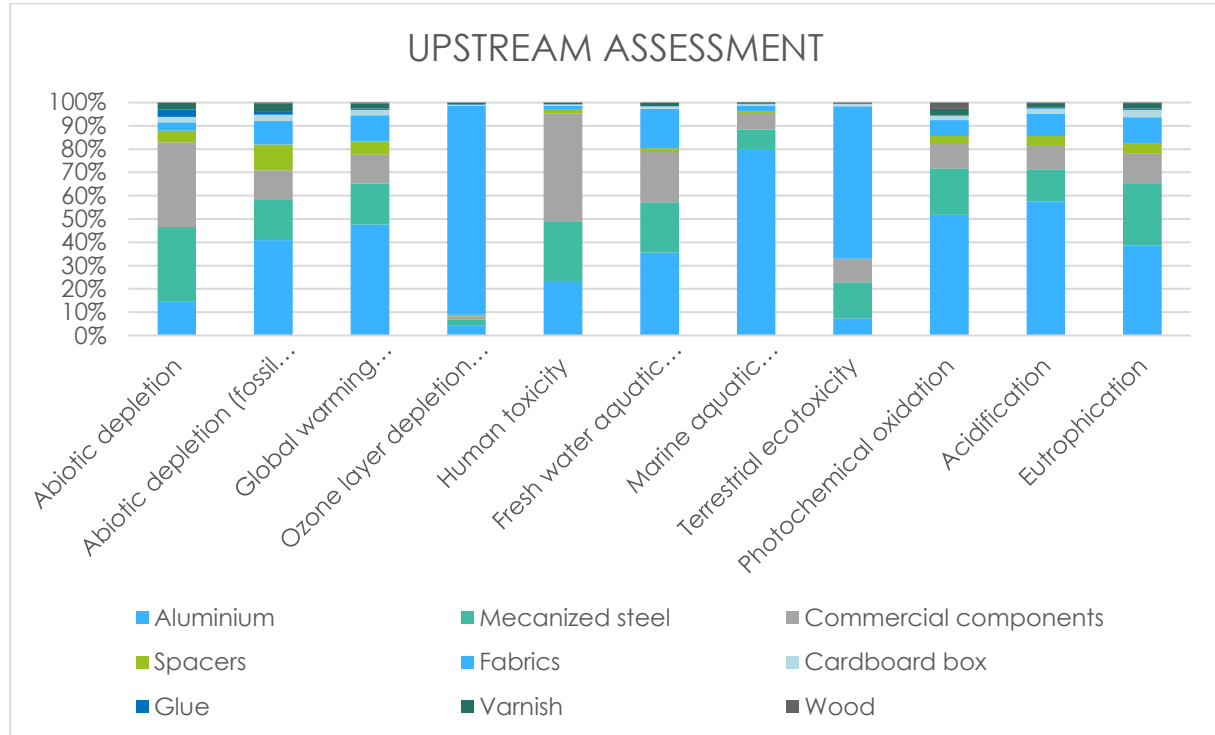


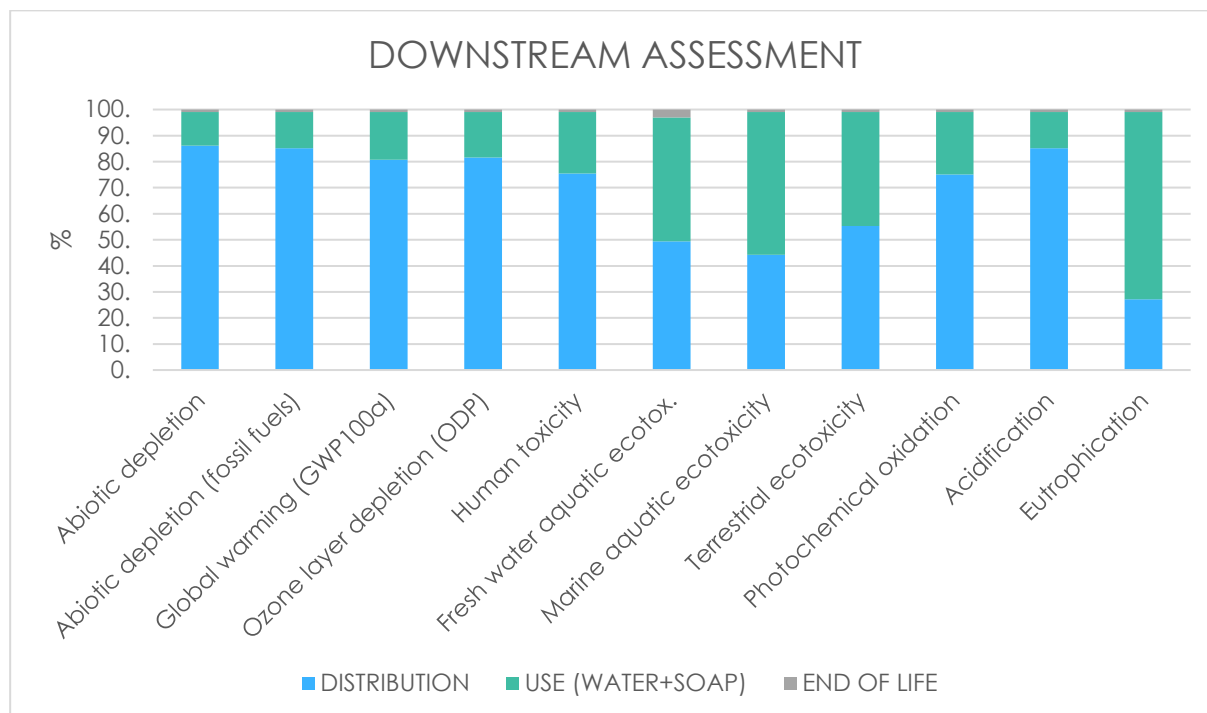
Resources

	Parameter	Units	TOTAL	UPSTREAM	CORE	DOWNSTREAM
NON-RENEWABLE RESOURCES MATERIALS	Lime	kg	3,68	3,41	0,197	0,072
	Gravel	kg	24,05	13,3	7,42	3,33
	Iron	kg	5,53	5,29	0,17	0,07
	Bauxite	kg	42,19	42,1	0,0627	0,0245
	Aluminium	kg	3,92	3,91	0,0058	0,0022
	Others	kg	2,32	1,25	0,756	0,312
	TOTAL	kg	81,68	69,26	8,61	3,81
NON-RENEWABLE RESOURCES ENERGY	Uranium	kg	1,76E-04	1,59E-04	1,51E-05	1,92E-06
	Heating oil	kg	14,581	11,4	2,437	0,743
	Coal /Lignite	kg	122,478	95,762	20,471	6,245
	Gas natural	kg	16,330	12,768	2,729	0,833
	TOTAL	kg	16,33	12,768	2,729	0,833
RENEWABLE RESOURCES MATERIALS	Carbon Dioxide	kg	1,53E+02	1,20E+02	2,56E+01	7,82E+00
	Wood	kg	35,648	35,3	0,317	0,031
	Others	kg	4,36	2,36	1,26	0,74
	TOTAL	kg	0,2521	0,23	0,015	0,0071
RENEWABLE RESOURCES ENERGY	Hydroelectric	MJ	40,2601	37,89	1,592	0,7781
	Biomass	MJ	31,786	35,326	6,125	0,335
	Wind	MJ	380,434	376,666	3,427	0,342
	Solar	MJ	51,237	44,955	6,222	0,059
	Geothermic	MJ	5,823	5,765	0,052	0,005
	TOTAL	MJ	1,941	1,922	0,017	0,002
SECONDARY RESOURCES MATERIALS		kg	5,92	5,92	-	-
SECONDARY RESOURCES ENERGY		MJ	-	-	-	-
RECOVERED ENERGY		MJ	-	-	-	-
TOTAL QUANTITY OF WATER		m³	1,678	1,617	0,049	2,411
AMOUNT OF WATER USED IN CORE PROCESSES		m³	0,028	-	0,028	-

Waste production

WASTE TYPE	Units	TOTAL (airmchair)	UPSTREAM	CORE	DOWNSTREAM
Hazardous waste	kg	0,004	0,004	1,177E-04	3,564E-05
Radioactive waste	kg	3,87E-03	2,42E-03	1,04E-03	4,04E-04
Non-hazardous waste	kg	29,642	20,496	6,328	2,818





Remarks

- Data shown in this declaration will be valid as long as there are no significant changes in the process analysed.
- Results obtained are not comparable for other product references or about other declarations, drawn up on the basis of another certification system.
- The verifier and the program operator are not responsible for any claims about the product or the legality of the product.

References

- ISO 14001:2015. Environmental Management Systems – Requirements with guidance for use (www.iso.org).
- ISO 9001:2015. Quality Management Systems – Requirements (www.iso.org).
- ISO 14025:2006. Environmental labels and declarations – Type III Environmental declarations – Principles and procedures. (www.iso.org).
- ISO14040:2006. Environmental Management – Life Cycle Assessment – Principles and framework. (www.iso.org).
- ISO 14044:2006. Environmental Management – Life Cycle Assessment – Requirements and guidelines. (www.iso.org).
- PCR “Seats” 2009:02 - Version 2.0 - Product Group Classification: UN CPC 3811” (www.environdedec.com).
- 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

- ECOINVENT Ecoinvent Centre, www.Eco-invent.org
- SIMAPRO SimaPro LCA Software, Pré Consultants, the Netherlands, www.pre-sustainability.com
- EC, Default data for End Of Life (EOL) for Product Environmental Footprint (PEF) during the Environmental Footprint (EF) pilot phase (ec.europa.eu).

Other relevant information

Programme

THE INTERNATIONAL EPD® SYSTEM

www.environdec.com



Third party verifier

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