Environmental Product Declaration

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

Screens

Unirol 80, Unirol 100, Unirol 130, Unirol 150, Unirol ZU (electromotorized)

Unirol 80, Unirol 100 (manual)

EPD of multiple products, based on results for specific products

Programme:	National Environmental Labelling Program, www.ekoznacka.cz
Programme operator:	Ministry of the Environment of the Czech Republic
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General information

Programme	National Environmental Labelling Program
Adress	Ministry of the Environment of the Czech Republic Vršovická 1442/65 Prague 10, 100 10, Czech Republic Ministry of the Environment of the Czech Republic
Website	https://www.ekoznacka.cz/

Accountabilities for PCR, LCA and independent, third-party verification
Product Category Rules (PCR)
CEN standard EN 15804:2012+A2:2019/AC:2021 serve as the core Product Category Rules (PCR)

Life Cycle Assessment (LCA)
LCA accountability: Lubos Nobilis, Nesuchyně 12, 270 07 Czech Republic, nobilis.lubos@gmail.com
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: *Jan Weinzettel, http://www.fernconsulting.cz, weinzettel@seznam.cz*
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 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.

Company information

EPD owner (Manufacturing company)	SERVIS CLIMAX a.s.
Address and VAT	Jesenice 1253, 755 01 Vsetín Registration Nº: 25352628 VAT Nº: CZ25352628
Production site and address	Jasenická 1492, 755 01 Vsetín, Czech Republic
Contacts	Roman Havel Phone: +420 737 266 767 E-mail: r.havel@climax.cz Web: https://www.servisclimax.eu/

We made history as CLIMAX in 1992 and since then we have grown into the largest manufacturer of shading products in the Czech Republic. We recall the first days of our existence with pride, but our real focus is on the present and the future. With dozens of products for internal and external shading, we have built a reputation as an innovative company that is constantly improving its services.

Led by founder Miroslav Jakubec, we put great emphasis on values such as creativity, hard work, intelligence, friendliness and decency. These values serve as a compass that guides us to make small but important improvements every day.

We are a company built on partnership, open communication and equality. We create an environment for our employees where lifelong learning and personal development are encouraged. We are proud to offer stable jobs while supporting employees in their personal growth. As a company, we take a responsible approach to the environment. Our products not only protect from the sun, but also from environmental impacts. With a minimal carbon footprint and a constant endeavour to save resources, we pursue environmental friendliness in the production of shading technology.

We ship our products to 35 countries and employ 567 people. In 2023, we proudly produced 520,000 units of shading technology, confirming our leading position on the market. We are ready to continue our journey, improving every day and becoming one of the best shading technology manufacturers in the world.

We are a traditional Czech producer. All our products are developed and manufactured in Vsetín. We are proud to export our products all over the world and to spread the good reputation of our country.

Product information

A modern alternative to external roller shutters and blinds are vertical façade awnings from Climax. Façade awnings protect against the sun, will handle wind and liven up the façade on any building. They will not allow sunbeams to enter the room but at the same time allow in enough daylight. On pergolas, side screen awnings function as wind barriers. All the fabrics on vertical façade awnings are of high quality and resistant against fading. Like other external shading solutions, also vertical façade awnings can be controlled either manually or using a motor.

Content declaration

The composition corresponds to the average representation of materials in all products.

Product components (kg)	**Unirol 80**		**Unirol 100**		**Post-consumer recycled material**	**Biogenic material, weight-% and kg C/DU**
	manual	motorized	manual	motorized		
Aluminium	8.42	8.78	10.83	11.19	0*	0
Electric motor	0	1.44	0	1.44	0*	0
Steel, other metals	2.53	2.96	6.94	6.51	0*	0
Plastics	1.89	1.96	3.32	3.27	0*	0

Product components (kg)	**Unirol 130**	**Unirol 150**	**Unirol ZU**	**Post-consumer recycled material**	**Biogenic material, weight-% and kg C/DU**
	motorized				
Aluminium	20.07	22.42	16.54	0*	0
Electric motor	1.44	1.44	1.44	0*	0
Steel, other metals	16.75	18.47	9.53	0*	0
Plastics	4.81	4.64	3.97	0*	0

Note: *There are no dangerous substances from the candidate list of SVHC for authorisation in this product*
** The content of recycled material is not declared by supplier, so the worst case approach (0 % of recycled material content) is used*

Motorized									
Packaging materials (kg)	**kg**	**Weight-% (vs product)**	**Weight biogenic carbon, kg C/DU**	**kg**	**Weight-% (vs product)**	**Weight biogenic carbon, kg C/DU**	**kg**	**Weight-% (vs product)**	**Weight biogenic carbon, kg C/DU**
	Unirol 80			**Unirol 100**			**Unirol 130**		
PE foils	2.19E-01	1.53%	0.00E+00	4.54E-01	2.04%	0.00E+00	8.54E-01	1.97%	0.00E+00
PET tapes	4.91E-03	0.03%	0.00E+00	1.02E-02	0.05%	0.00E+00	1.91E-02	0.04%	0.00E+00
cardboard	7.57E-01	5.27%	3.38E-01	1.57E+00	7.04%	7.00E-01	2.95E+00	6.81%	1.31E+00
wood	2.39E-01	1.67%	1.07E-01	4.96E-01	2.23%	2.21E-01	9.31E-01	2.15%	4.16E-01
TOTAL	**1.22E+00**	**8.50%**	**4.45E-01**	**2.53E+00**	**11.35%**	**9.21E-01**	**4.75E+00**	**10.98%**	**1.73E+00**

Motorized						
Packaging materials (kg)	**kg**	**Weight-% (vs product)**	**Weight biogenic carbon, kg C/DU**	**kg**	**Weight-% (vs product)**	**Weight biogenic carbon, kg C/DU**
	Unirol 150			**Unirol ZU**		
PE foils	8.50E-01	1.80%	0.00E+00	5.91E-01	1.86%	0.00E+00
PET tapes	1.90E-02	0.04%	0.00E+00	1.32E-02	0.04%	0.00E+00
cardboard	2.93E+00	6.22%	1.31E+00	2.04E+00	6.43%	9.09E-01
wood	9.27E-01	1.97%	4.14E-01	6.44E-01	2.03%	2.87E-01
TOTAL	**4.73E+00**	**10.03%**	**1.72E+00**	**3.28E+00**	**10.37%**	**1.20E+00**

Manual						
Packaging materials (kg)	**kg**	**Weight-% (vs product)**	**Weight biogenic carbon, kg C/DU**	**kg**	**Weight-% (vs product)**	**Weight biogenic carbon, kg C/DU**
	Unirol 150			**Unirol 80**		
PE foils	2.19E-01	1.61%	0.00E+00	4.54E-01	2.11%	0.00E+00
PET tapes	4.91E-03	0.04%	0.00E+00	1.02E-02	0.05%	0.00E+00
cardboard	7.57E-01	5.55%	3.38E-01	1.57E+00	7.27%	7.00E-01
wood	2.39E-01	1.75%	1.07E-01	4.96E-01	2.30%	2.21E-01
TOTAL	**1.22E+00**	**8.95%**	**4.45E-01**	**2.53E+00**	**11.72%**	**9.21E-01**

UN CPC: 4299, fabricated metal products - other fabricated metal

Biogenic carbon content

BIOGENIC CARBON CONTENT ***per 1 pc of external blinds system***	
Biogenic carbon content in product	0
Biogenic carbon content in accompanying packaging	0.445 – 1.73 kg (cardboard and wood)

LCA information

Declared unit:	**1 pc of screens system (area)** defined below:

type	*drive*	*weight (kg)*	***area (m^2)***
Unirol 80	*motorized*	*14.35*	***1.95***
Unirol 100	*motorized*	*22.27*	***4.04***
Unirol 130	*motorized*	*43.27*	***7.59***
Unirol 150	*motorized*	*47.16*	***7.56***
Unirol ZU	*motorized*	*31.67*	***5.25***
Unirol 80	*manual*	*13.63*	***1.95***
Unirol 100	*manual*	*21.56*	***4.04***

Reference service life:	not exactly declared; *the value 18 years of service life was used for calculation* of *energy consumption in the use phase*
Time representativeness:	2023
Database(s) and LCA software used:	Ecoinvent 3.10 (using the EN15804 proc./allocation model), Simapro v. 9.6 EN 15804 reference package based on EF 3.1 *(https://eplca.jrc.ec.europa.eu/LCDN/developerEF.html)*
Cut-off rules:	Neglected flow in all modules is less than 1% of the energy use and total mass.
Allocation method:	Economic allocation (for annual turnover 2023) for this part (screens) of the total production (A3 energy/fuels consumption, waste and air emissions outputs). Production is on one site in different sections. Allocations processed per average m^2 of screens system production: A3 energy/fuels consumption, waste and air emissions outputs are allocated by total products (screens) manufactured over 1 year
Description of system boundaries:	The type of EPD is Cradle to grave and module D (EPD Type c - Modules A1-A3, A4-A5, B1-B7, C1-C4, and D)
Infrastructure/capital goods:	Infrastructure is part of the genetic processes used for upstream and downstream. for the Core phase, infrastructure was not considered.

Production stage (A1-A3)

The A1 module contains primarily the production of components for the assembly of a complete screens. These are profiles and components made of aluminum alloy (parts of boxes, shaft, lower profile), steel (sheets, bars) and various small parts plastics. Furthermore, it concerns the production of electricity, the extraction and distribution of natural gas, and the production of fuels and operational inputs for production.

Phase A2 includes the transportation of the above-mentioned materials and components to production in phase A3 and internal transport (fuels consumption).

In production (A3), the modification of components takes place, mainly the production of slats and profiles and the completion of screens systems based on specific (tailored) orders. This is related to

the consumption of electricity for processing of all components and products, natural gas for heating and fuels for internal and commercial transport and emissions from their use.

PE foil, PET tape, paper, cardboard and wood are used for product packaging.

Production generates waste from production (aluminium, iron and steel, plastics) and waste packaging (plastics, paper and cardboard, mixed).

GWP-GHG from the production of electricity: 0.66 $kgCO_2eq/kWh$

(Czech residual mix, contains: 50,8 % of fossil fuels (44,7% of lignite and hard coal; 5,8% of natural gas; 0,3% of the others), 42.8 % of nuclear, 6,4 % of renewable sources)

Calculation for follow modules and stages (construction, use phase, end of life) are based on one of the most realistic and representative scenarios:

Transport to construction stage (A4)

The A4 module represents transport scenario for 1000 km of road (HGV) transport based on expert estimation.

Construction-Installation (A5)

Installation of screens to building can be done in different ways and using different tools and fasteners. Thus, only the production of packaging waste is taken into account in the A5 module.

Use stage (B1-B7)

Maintenance, repair, replacement, refurbishment and washing during the use phase is not expected, but it is not excluded either. Due to the difficult quantification, these activities are not taken into account.

In the case of manual system types, no inputs and outputs are modeled in the modules B1-B7.

In the case of motorized systems, a total electricity consumption of 91.93 kWh is considered over the considered lifetime (18 years).

The system activity (120 W) is modeled in the range of 1 minute every day and participates by 13,14 kWh on total consumption. The stand-by mode (0,5 W) is calculated as continuous and participates by 78,79 kWh on total consumption in this stage (Electricity, low voltage, generation mix for Czech Republic).

End-of-Life stage (C1-C4)

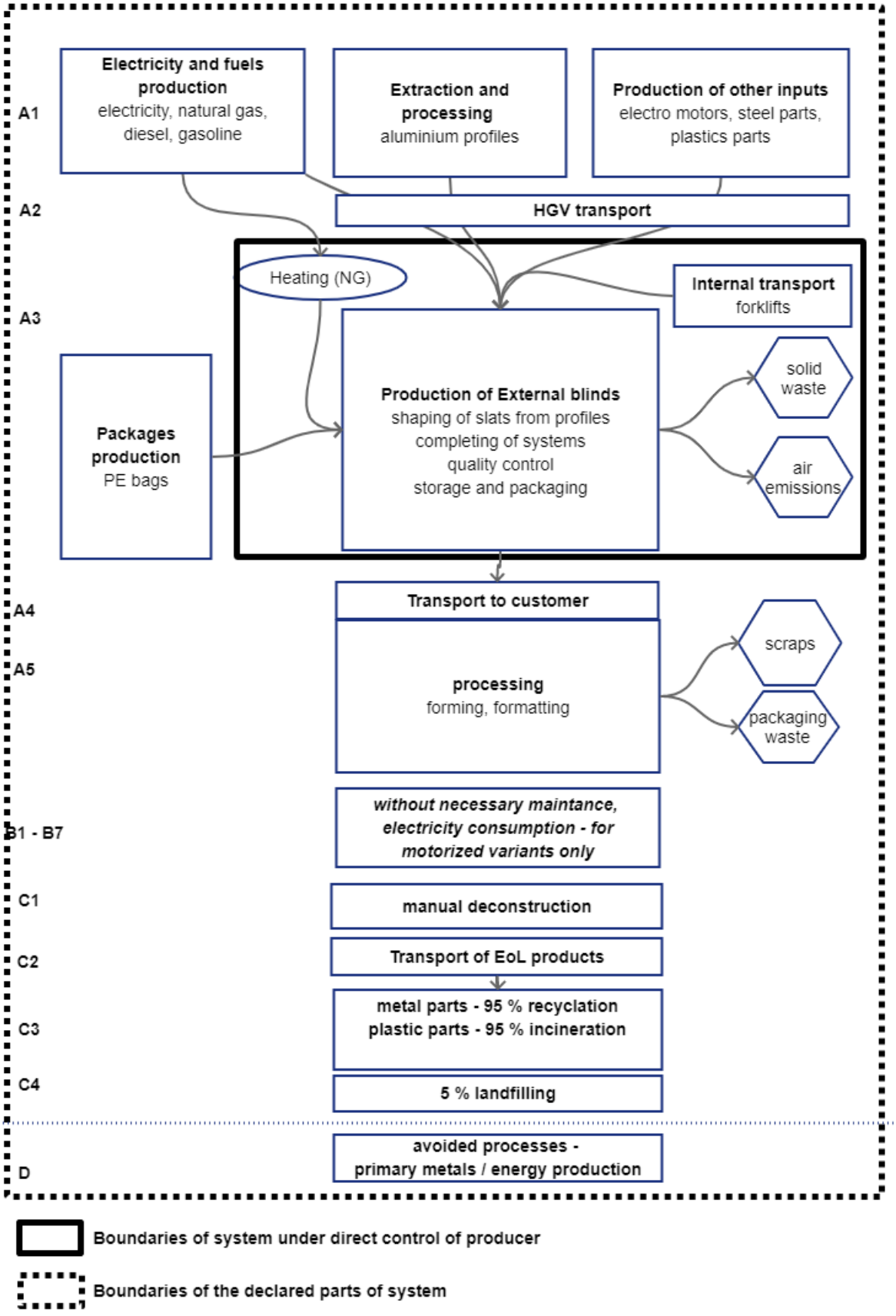
In the C1 module, manual deconstruction and transport for processing at a distance of 50 km is considered.

Overall, the processing of 95% of the systems is modeled, contains subsequent recycling of 100 % metals (with 10 % loss of material) and electric motor and plastics incineration with energy recovery. The remaining 5% of the EoL product is landfilled in the model.

Benefits and loads (D) - Future Reuse, Recycling or Energy Recovery Potentials

Beyond the system boundary these avoided products are considered as results of recycling and incineration with energy recovery: Aluminium, primary; Steel, unalloyed; Electricity, high voltage (CZ); Heat, district or industrial. The quantity of avoided products is provided in the Output flows tables (page 53-61).

System diagram



Results information

	Product stage			Construction stage		Use stage	End of life stage				Benefits and loads beyond the system boundary
	Raw material supply	Transport	Manufacturing	Transport	Construction-Installation process	Use Maintenance Repair Replacement Refurbishment Operational energy use Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-recovery
Module	**A1**	**A2**	**A3**	**A4**	**A5**	**B1 - B7**	**C1**	**C2**	**C3**	**C4**	**D**
Modules declared	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
Geography	**GLO**	**EU**	**EU**	**EU**	**EU**	**EU**	**EU**	**EU**	**EU**	**EU**	**EU**
Specific data	**>90%**			-	-	-	-	-	-	-	-
Variation - products	**N/A****			-	-	-	-	-	-	-	-
Variation - sites	**N/A**			-	-	-	-	-	-	-	-
	X – module declared ***ND – module not declared***										

** Based on GWP-GHG of Stage A3 divided by GWP-GHG for stages A1-A3. Data for A3 is specific to Climax Servis facilities*

*** Results are calculated for specific product types*

Notice: It is not recommended to use the results of modules A1-A3 without considering the results of module C.

Environmental impacts

EN 15804 reference package based on EF 3.1 was used as LCIA method.

CORE ENVIRONMENTAL IMPACTS ***per 1 pc (1,95 m^2) of Unirol 80 without electric motor (manual)***

Impact category	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Climate change	kg CO2 eq	2.03E+02	2.61E+00	5.04E-01	0	0	1.29E-01	5.99E+00	5.05E-01	-1.78E+02
Climate change – Fossil	kg CO2 eq	2.04E+02	2.61E+00	5.83E-02	0	0	1.29E-01	5.98E+00	3.09E-02	-1.79E+02
Climate change - Biogenic*	kg CO2 eq	-1.57E+00	1.76E-03	1.57E+00	0	0	8.72E-05	9.60E-03	4.74E-01	4.99E-01
Climate change - Land use and LU change	kg CO2 eq	1.14E-01	8.68E-04	3.21E-05	0	0	4.30E-05	8.53E-04	1.63E-06	-8.85E-02
Ozone depletion	kg CFC11 eq	6.53E-06	5.19E-08	2.18E-10	0	0	2.57E-09	1.75E-08	2.51E-10	-7.57E-07
Acidification	mol H+ eq	1.84E+00	5.44E-03	7.27E-04	0	0	2.69E-04	7.00E-03	8.33E-05	-1.67E+00
Eutrophication, freshwater***	kg P eq	9.92E-02	1.77E-04	1.00E-05	0	0	8.75E-06	4.75E-04	4.33E-05	-9.14E-02
Eutrophication, marine	kg N eq	2.58E-01	1.31E-03	3.59E-04	0	0	6.46E-05	1.29E-03	9.18E-04	-2.20E-01
Eutrophication, terrestrial	mol N eq	2.66E+00	1.41E-02	3.68E-03	0	0	6.97E-04	1.30E-02	2.74E-04	-2.26E+00
Photochemical ozone formation	kg NMVOC eq	8.25E-01	9.03E-03	8.92E-04	0	0	4.47E-04	4.01E-03	2.28E-04	-6.93E-01
Resource use, fossils***	MJ	6.08E-04	8.48E-06	3.78E-07	0	0	4.20E-07	4.46E-05	2.04E-08	-1.69E-04
Resource use, minerals and metals***	kg Sb eq	2.20E+03	3.67E+01	2.92E-01	0	0	1.82E+00	1.17E+01	1.82E-01	-1.82E+03
Water use***	m3 depriv.	3.10E+01	2.07E-01	1.40E-02	0	0	1.02E-02	5.04E-01	-1.32E-01	-2.17E+01

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.

** the impact category Climate change – biogenic was calculated based on Annex 2 PCR 2019:14 Construction products*

*** 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 almost equal to the GWP indicator originally defined in EN 15804:2012+A1:2013*

**** 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.*

CORE ENVIRONMENTAL IMPACTS ***per 1 pc (1,95 m^2) of Unirol 80 with electric motor***

Impact category	Unit	A1-A3	A4	A5	B1-B5	B6	B7	C1	C2	C3	C4	D
Climate change	kg CO2 eq	1.72E+00	2.19E+02	2.75E+00	5.27E-01	0	5.91E+01	0	1.37E-01	6.44E+00	5.31E-01	-1.61E+02
Climate change – Fossil	kg CO2 eq	2.82E+00	2.20E+02	2.75E+00	6.09E-02	0	5.83E+01	0	1.37E-01	6.43E+00	3.24E-02	-1.61E+02
Climate change - Biogenic*	kg CO2 eq	-1.11E+00	-1.74E+00	1.11E+00	4.66E-01	0	6.83E-01	0	9.23E-05	1.22E-02	4.98E-01	4.50E-01
Climate change - Land use and LU change	kg CO2 eq	1.53E-02	1.45E-01	9.14E-04	3.35E-05	0	9.51E-02	0	4.55E-05	8.79E-04	1.71E-06	-8.01E-02
Ozone depletion	kg CFC11 eq	1.53E-07	6.76E-06	5.47E-08	2.27E-10	0	4.21E-07	0	2.72E-09	1.83E-08	2.63E-10	-6.88E-07
Acidification	mol H+ eq	1.10E-02	2.07E+00	5.73E-03	7.59E-04	0	2.58E-01	0	2.85E-04	7.37E-03	8.75E-05	-1.51E+00
Eutrophication, freshwater***	kg P eq	8.22E-04	1.16E-01	1.86E-04	1.05E-05	0	8.85E-02	0	9.26E-06	4.64E-04	4.55E-05	-8.26E-02
Eutrophication, marine	kg N eq	2.99E-03	3.42E-01	1.38E-03	3.75E-04	0	5.61E-02	0	6.84E-05	2.01E-03	9.64E-04	-1.99E-01
Eutrophication, terrestrial	mol N eq	2.53E-02	2.91E+00	1.48E-02	3.84E-03	0	4.18E-01	0	7.38E-04	1.52E-02	2.88E-04	-2.04E+00
Photochemical ozone formation	kg NMVOC eq	1.07E-02	9.02E-01	9.51E-03	9.31E-04	0	1.22E-01	0	4.73E-04	4.71E-03	2.39E-04	-6.25E-01
Resource use, fossils***	MJ	1.07E-05	2.50E-03	8.93E-06	3.95E-07	0	4.04E-04	0	4.44E-07	4.14E-05	2.14E-08	-1.49E-04
Resource use, minerals and metals***	kg Sb eq	5.20E+01	2.38E+03	3.87E+01	3.05E-01	0	1.01E+03	0	1.92E+00	1.21E+01	1.91E-01	-1.64E+03
Water use***	m3 depriv.	8.47E-01	3.66E+01	2.18E-01	1.46E-02	0	2.69E+01	0	1.09E-02	5.20E-01	-1.39E-01	-1.95E+01

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.

** the impact category Climate change – biogenic was calculated based on Annex 2 PCR 2019:14 Construction products*

*** 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 almost equal to the GWP indicator originally defined in EN 15804:2012+A1:2013*

**** 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.*

CORE ENVIRONMENTAL IMPACTS ***per 1 pc (4,04 m^2) of Unirol 100 without electric motor (manual)***

Impact category	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Climate change	kg CO2 eq	2.79E+02	4.10E+00	1.06E+00	0	0	2.05E-01	9.58E+00	7.96E-01	-2.33E+02
Climate change – Fossil	kg CO2 eq	2.82E+02	4.10E+00	1.22E-01	0	0	2.05E-01	9.56E+00	4.86E-02	-2.33E+02
Climate change - Biogenic*	kg CO2 eq	-2.84E+00	2.76E-03	2.84E+00	0	0	1.38E-04	1.23E-02	7.47E-01	6.19E-01
Climate change - Land use and LU change	kg CO2 eq	1.67E-01	1.36E-03	6.73E-05	0	0	6.82E-05	1.10E-03	2.57E-06	-1.16E-01
Ozone depletion	kg CFC11 eq	1.23E-05	8.14E-08	4.57E-10	0	0	4.08E-09	2.30E-08	3.95E-10	-1.01E-06
Acidification	mol H+ eq	2.44E+00	8.53E-03	1.52E-03	0	0	4.27E-04	9.35E-03	1.31E-04	-2.15E+00
Eutrophication, freshwater***	kg P eq	1.33E-01	2.77E-04	2.10E-05	0	0	1.39E-05	6.10E-04	6.82E-05	-1.19E-01
Eutrophication, marine	kg N eq	3.57E-01	2.05E-03	7.53E-04	0	0	1.03E-04	1.90E-03	1.45E-03	-2.86E-01
Eutrophication, terrestrial	mol N eq	3.69E+00	2.21E-02	7.71E-03	0	0	1.11E-03	1.87E-02	4.32E-04	-2.93E+00
Photochemical ozone formation	kg NMVOC eq	1.15E+00	1.42E-02	1.87E-03	0	0	7.10E-04	5.64E-03	3.59E-04	-9.00E-01
Resource use, fossils***	MJ	1.24E-03	1.33E-05	7.93E-07	0	0	6.67E-07	5.68E-05	3.21E-08	-2.59E-04
Resource use, minerals and metals***	kg Sb eq	3.11E+03	5.76E+01	6.13E-01	0	0	2.89E+00	1.53E+01	2.87E-01	-2.38E+03
Water use***	m3 depriv.	4.81E+01	3.25E-01	2.93E-02	0	0	1.63E-02	7.35E-01	-2.09E-01	-2.95E+01

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.

** the impact category Climate change – biogenic was calculated based on Annex 2 PCR 2019:14 Construction products*

*** 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 almost equal to the GWP indicator originally defined in EN 15804:2012+A1:2013*

**** 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.*

CORE ENVIRONMENTAL IMPACTS ***per 1 pc (4,04 m^2) of Unirol 100 with electric motor***

Impact category	Unit	A1-A3	A4	A5	B1-B5	B6	B7	C1	C2	C3	C4	D
Climate change	kg CO2 eq	3.12E+02	4.24E+00	1.09E+00	0	5.91E+01	0	0	2.11E-01	1.01E+01	8.18E-01	-2.25E+02
Climate change – Fossil	kg CO2 eq	3.15E+02	4.23E+00	1.26E-01	0	5.83E+01	0	0	2.11E-01	1.01E+01	5.00E-02	-2.26E+02
Climate change - Biogenic*	kg CO2 eq	-3.10E+00	2.86E-03	3.10E+00	0	6.83E-01	0	0	1.42E-04	1.54E-02	7.68E-01	5.98E-01
Climate change - Land use and LU change	kg CO2 eq	2.09E-01	1.41E-03	6.95E-05	0	9.51E-02	0	0	7.01E-05	1.17E-03	2.64E-06	-1.13E-01
Ozone depletion	kg CFC11 eq	2.67E-05	8.41E-08	4.72E-10	0	4.21E-07	0	0	4.19E-09	2.46E-08	4.06E-10	-9.80E-07
Acidification	mol H+ eq	2.82E+00	8.81E-03	1.57E-03	0	2.58E-01	0	0	4.39E-04	1.00E-02	1.35E-04	-2.08E+00
Eutrophication, freshwater***	kg P eq	1.57E-01	2.87E-04	2.17E-05	0	8.85E-02	0	0	1.43E-05	6.23E-04	7.01E-05	-1.15E-01
Eutrophication, marine	kg N eq	4.62E-01	2.12E-03	7.78E-04	0	5.61E-02	0	0	1.05E-04	2.65E-03	1.49E-03	-2.76E-01
Eutrophication, terrestrial	mol N eq	4.16E+00	2.28E-02	7.97E-03	0	4.18E-01	0	0	1.14E-03	2.12E-02	4.44E-04	-2.83E+00
Photochemical ozone formation	kg NMVOC eq	1.31E+00	1.46E-02	1.93E-03	0	1.22E-01	0	0	7.30E-04	6.47E-03	3.69E-04	-8.70E-01
Resource use, fossils***	MJ	3.19E-03	1.37E-05	8.19E-07	0	4.04E-04	0	0	6.85E-07	5.59E-05	3.30E-08	-2.49E-04
Resource use, minerals and metals***	kg Sb eq	3.51E+03	5.95E+01	6.33E-01	0	1.01E+03	0	0	2.97E+00	1.62E+01	2.95E-01	-2.30E+03
Water use***	m3 depriv.	5.67E+01	3.36E-01	3.03E-02	0	2.69E+01	0	0	1.67E-02	7.64E-01	-2.14E-01	-2.85E+01

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.

** the impact category Climate change – biogenic was calculated based on Annex 2 PCR 2019:14 Construction products*

*** 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 almost equal to the GWP indicator originally defined in EN 15804:2012+A1:2013*

**** 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.*

CORE ENVIRONMENTAL IMPACTS ***per 1 pc (7,59 m^2) of Unirol 130 with electric motor***

Impact category	Unit	A1-A3	A4	A5	B1-B5	B6	B7	C1	C2	C3	C4	D
Climate change	kg CO2 eq	5.62E+02	8.23E+00	2.05E+00	0	5.91E+01	0	0	4.11E-01	1.52E+01	1.59E+00	-4.25E+02
Climate change – Fossil	kg CO2 eq	5.68E+02	8.22E+00	2.37E-01	0	5.83E+01	0	0	4.10E-01	1.52E+01	9.72E-02	-4.26E+02
Climate change - Biogenic*	kg CO2 eq	-5.65E+00	5.55E-03	5.65E+00	0	6.83E-01	0	0	2.77E-04	2.54E-02	1.49E+00	1.11E+00
Climate change - Land use and LU change	kg CO2 eq	3.58E-01	2.73E-03	1.31E-04	0	9.51E-02	0	0	1.36E-04	2.06E-03	5.14E-06	-2.11E-01
Ozone depletion	kg CFC11 eq	2.39E-05	1.63E-07	8.86E-10	0	4.21E-07	0	0	8.16E-09	4.26E-08	7.89E-10	-1.83E-06
Acidification	mol H+ eq	5.02E+00	1.71E-02	2.96E-03	0	2.58E-01	0	0	8.55E-04	1.71E-02	2.62E-04	-3.89E+00
Eutrophication, freshwater***	kg P eq	2.79E-01	5.57E-04	4.08E-05	0	8.85E-02	0	0	2.78E-05	1.12E-03	1.36E-04	-2.16E-01
Eutrophication, marine	kg N eq	7.84E-01	4.11E-03	1.46E-03	0	5.61E-02	0	0	2.05E-04	3.87E-03	2.89E-03	-5.20E-01
Eutrophication, terrestrial	mol N eq	7.48E+00	4.44E-02	1.50E-02	0	4.18E-01	0	0	2.21E-03	3.37E-02	8.63E-04	-5.32E+00
Photochemical ozone formation	kg NMVOC eq	2.33E+00	2.85E-02	3.63E-03	0	1.22E-01	0	0	1.42E-03	1.04E-02	7.17E-04	-1.64E+00
Resource use, fossils***	MJ	4.39E-03	2.67E-05	1.54E-06	0	4.04E-04	0	0	1.33E-06	1.03E-04	6.42E-08	-5.15E-04
Resource use, minerals and metals***	kg Sb eq	6.22E+03	1.16E+02	1.19E+00	0	1.01E+03	0	0	5.77E+00	2.84E+01	5.74E-01	-4.34E+03
Water use***	m3 depriv.	9.90E+01	6.52E-01	5.68E-02	0	2.69E+01	0	0	3.26E-02	1.24E+00	-4.17E-01	-5.49E+01

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.

** the impact category Climate change – biogenic was calculated based on Annex 2 PCR 2019:14 Construction products*

*** 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 almost equal to the GWP indicator originally defined in EN 15804:2012+A1:2013*

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CORE ENVIRONMENTAL IMPACTS *per 1 pc (7,56 m^2) of Unirol 150 with electric motor*

Impact category	Unit	A1-A3	A4	A5	B1-B5	B6	B7	C1	C2	C3	C4	D
Climate change	kg CO2 eq	6.12E+02	8.97E+00	2.04E+00	0	5.91E+01	0	0	4.49E-01	1.53E+01	1.74E+00	-4.73E+02
Climate change – Fossil	kg CO2 eq	6.17E+02	8.96E+00	2.36E-01	0	5.83E+01	0	0	4.48E-01	1.53E+01	1.06E-01	-4.74E+02
Climate change - Biogenic*	kg CO2 eq	-5.75E+00	6.05E-03	5.75E+00	0	6.83E-01	0	0	3.03E-04	2.79E-02	1.63E+00	1.25E+00
Climate change - Land use and LU change	kg CO2 eq	3.84E-01	2.98E-03	1.30E-04	0	9.51E-02	0	0	1.49E-04	2.27E-03	5.62E-06	-2.35E-01
Ozone depletion	kg CFC11 eq	2.45E-05	1.78E-07	8.82E-10	0	4.21E-07	0	0	8.91E-09	4.68E-08	8.63E-10	-2.02E-06
Acidification	mol H+ eq	5.49E+00	1.87E-02	2.94E-03	0	2.58E-01	0	0	9.34E-04	1.86E-02	2.87E-04	-4.34E+00
Eutrophication, freshwater***	kg P eq	3.06E-01	6.07E-04	4.06E-05	0	8.85E-02	0	0	3.04E-05	1.24E-03	1.49E-04	-2.41E-01
Eutrophication, marine	kg N eq	8.46E-01	4.48E-03	1.45E-03	0	5.61E-02	0	0	2.24E-04	4.02E-03	3.16E-03	-5.79E-01
Eutrophication, terrestrial	mol N eq	8.11E+00	4.84E-02	1.49E-02	0	4.18E-01	0	0	2.42E-03	3.55E-02	9.43E-04	-5.94E+00
Photochemical ozone formation	kg NMVOC eq	2.52E+00	3.10E-02	3.61E-03	0	1.22E-01	0	0	1.55E-03	1.10E-02	7.84E-04	-1.83E+00
Resource use, fossils***	MJ	4.59E-03	2.91E-05	1.53E-06	0	4.04E-04	0	0	1.46E-06	1.15E-04	7.02E-08	-5.68E-04
Resource use, minerals and metals***	kg Sb eq	6.72E+03	1.26E+02	1.18E+00	0	1.01E+03	0	0	6.31E+00	3.12E+01	6.27E-01	-4.83E+03
Water use***	m3 depriv.	1.05E+02	7.11E-01	5.65E-02	0	2.69E+01	0	0	3.56E-02	1.30E+00	-4.56E-01	-6.09E+01

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.

** the impact category Climate change – biogenic was calculated based on Annex 2 PCR 2019:14 Construction products*

*** 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 almost equal to the GWP indicator originally defined in EN 15804:2012+A1:2013*

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CORE ENVIRONMENTAL IMPACTS ***per 1 pc (5,25 m^2) of Unirol ZU with electric motor***

Impact category	Unit	A1-A3	A4	A5	B1-B5	B6	B7	C1	C2	C3	C4	D
Climate change	kg CO2 eq	4.42E+02	6.02E+00	1.42E+00	0	5.91E+01	0	0	3.00E-01	1.35E+01	1.16E+00	-3.42E+02
Climate change – Fossil	kg CO2 eq	4.46E+02	6.02E+00	1.64E-01	0	5.83E+01	0	0	3.00E-01	1.35E+01	7.11E-02	-3.43E+02
Climate change - Biogenic*	kg CO2 eq	-4.17E+00	4.06E-03	4.17E+00	0	6.83E-01	0	0	2.03E-04	2.16E-02	1.09E+00	9.24E-01
Climate change - Land use and LU change	kg CO2 eq	2.78E-01	2.00E-03	9.03E-05	0	9.51E-02	0	0	9.98E-05	1.72E-03	3.76E-06	-1.70E-01
Ozone depletion	kg CFC11 eq	1.74E-05	1.20E-07	6.13E-10	0	4.21E-07	0	0	5.97E-09	3.58E-08	5.77E-10	-1.46E-06
Acidification	mol H+ eq	4.03E+00	1.25E-02	2.05E-03	0	2.58E-01	0	0	6.25E-04	1.45E-02	1.92E-04	-3.17E+00
Eutrophication, freshwater***	kg P eq	2.23E-01	4.07E-04	2.82E-05	0	8.85E-02	0	0	2.03E-05	9.30E-04	9.98E-05	-1.75E-01
Eutrophication, marine	kg N eq	6.29E-01	3.01E-03	1.01E-03	0	5.61E-02	0	0	1.50E-04	3.43E-03	2.12E-03	-4.20E-01
Eutrophication, terrestrial	mol N eq	5.87E+00	3.25E-02	1.03E-02	0	4.18E-01	0	0	1.62E-03	2.92E-02	6.31E-04	-4.31E+00
Photochemical ozone formation	kg NMVOC eq	1.83E+00	2.08E-02	2.51E-03	0	1.22E-01	0	0	1.04E-03	8.94E-03	5.25E-04	-1.32E+00
Resource use, fossils***	MJ	2.96E-03	1.95E-05	1.06E-06	0	4.04E-04	0	0	9.75E-07	8.49E-05	4.70E-08	-3.70E-04
Resource use, minerals and metals***	kg Sb eq	4.85E+03	8.46E+01	8.22E-01	0	1.01E+03	0	0	4.22E+00	2.38E+01	4.20E-01	-3.49E+03
Water use***	m3 depriv.	7.38E+01	4.77E-01	3.93E-02	0	2.69E+01	0	0	2.38E-02	1.07E+00	-3.05E-01	-4.29E+01

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** the impact category Climate change – biogenic was calculated based on Annex 2 PCR 2019:14 Construction products*

*** 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 almost equal to the GWP indicator originally defined in EN 15804:2012+A1:2013*

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ADDITIONAL ENVIRONMENTAL IMPACTS *per 1 pc (1,95 m²) of Unirol 80 without electric motor*

Impact category	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Particulate matter	disease inc.	1.21E-05	1.92E-07	7.87E-09	0	0	9.51E-09	1.09E-07	1.20E-09	-1.01E-05
Ionising radiation	kBq U-235 eq	1.21E+01	4.76E-02	5.42E-03	0	0	2.36E-03	1.09E-01	9.15E-04	-9.70E+00
Human toxicity, non-cancer**	CTUh	1.64E-06	2.38E-08	1.93E-09	0	0	1.18E-09	5.20E-08	1.24E-09	-1.35E-06
Human toxicity, cancer**	CTUh	1.02E-06	1.85E-08	8.47E-10	0	0	9.17E-10	1.03E-08	5.11E-11	-9.15E-07
Ecotoxicity, freshwater	CTUe	8.69E+02	1.00E+01	5.70E-01	0	0	4.95E-01	1.78E+01	7.39E-01	-6.68E+02
Land use**	Pt	4.60E+02	2.22E+01	3.22E-01	0	0	1.10E+00	1.08E+01	3.96E-01	-2.78E+02

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*** Disclaimer: This impact category deals mainly with the eventual impact of low dose ionising 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 ionising radiation from the soil, from radon and from some construction materials is also not measured by this indicator.*

ADDITIONAL ENVIRONMENTAL IMPACTS *per 1 pc (1,95 m²) of Unirol 80 with electric motor*

Impact category	Unit	A1-A3	A4	A5	B1-B5	B6	B7	C1	C2	C3	C4	D
Particulate matter	disease inc.	1.34E-05	2.02E-07	8.22E-09	0	6.20E-07	0	0	1.01E-08	2.20E-07	1.26E-09	-9.07E-06
Ionising radiation	kBq U-235 eq	1.44E+01	5.02E-02	5.66E-03	0	2.64E+01	0	0	2.50E-03	1.08E-01	9.61E-04	-8.83E+00
Human toxicity, non-cancer**	CTUh	3.25E-06	2.50E-08	2.02E-09	0	6.74E-07	0	0	1.25E-09	5.82E-08	1.30E-09	-1.21E-06
Human toxicity, cancer**	CTUh	1.20E-06	1.95E-08	8.85E-10	0	8.77E-08	0	0	9.71E-10	1.13E-08	5.37E-11	-7.42E-07
Ecotoxicity, freshwater	CTUe	1.41E+03	1.05E+01	5.96E-01	0	2.23E+02	0	0	5.24E-01	2.03E+01	7.76E-01	-5.77E+02
Land use**	Pt	6.02E+02	2.34E+01	3.36E-01	0	1.15E+02	0	0	1.16E+00	1.04E+01	4.16E-01	-2.50E+02

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ADDITIONAL ENVIRONMENTAL IMPACTS *per 1 pc (4,04 m²) of Unirol 100 without electric motor*

Impact category	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Particulate matter	disease inc.	1.72E-05	3.02E-07	1.65E-08	0	0	1.51E-08	1.41E-07	1.90E-09	-1.34E-05
Ionising radiation	kBq U-235 eq	1.76E+01	7.47E-02	1.14E-02	0	0	3.74E-03	1.40E-01	1.44E-03	-1.27E+01
Human toxicity, non-cancer**	CTUh	2.43E-06	3.73E-08	4.06E-09	0	0	1.87E-09	7.19E-08	1.96E-09	-1.86E-06
Human toxicity, cancer**	CTUh	2.04E-06	2.91E-08	1.78E-09	0	0	1.46E-09	1.36E-08	8.05E-11	-1.81E-06
Ecotoxicity, freshwater	CTUe	1.48E+03	1.57E+01	1.20E+00	0	0	7.86E-01	2.66E+01	1.16E+00	-1.06E+03
Land use**	Pt	7.42E+02	3.48E+01	6.75E-01	0	0	1.74E+00	1.38E+01	6.24E-01	-3.74E+02

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ADDITIONAL ENVIRONMENTAL IMPACTS *per 1 pc (4,04 m²) of Unirol 100 with electric motor*

Impact category	Unit	A1-A3	A4	A5	B1-B5	B6	B7	C1	C2	C3	C4	D
Particulate matter	*disease inc.*	1.95E-05	3.12E-07	1.71E-08	0	6.20E-07	0	0	1.55E-08	2.57E-07	1.95E-09	-1.29E-05
Ionising radiation	*kBq U-235 eq*	2.09E+01	7.72E-02	1.17E-02	0	2.64E+01	0	0	3.85E-03	1.43E-01	1.48E-03	-1.24E+01
*Human toxicity, non-cancer***	*CTUh*	4.18E-06	3.85E-08	4.19E-09	0	6.74E-07	0	0	1.92E-09	8.00E-08	2.01E-09	-1.79E-06
*Human toxicity, cancer***	*CTUh*	2.26E-06	3.00E-08	1.84E-09	0	8.77E-08	0	0	1.50E-09	1.50E-08	8.27E-11	-1.71E-06
Ecotoxicity, freshwater	*CTUe*	2.09E+03	1.62E+01	1.24E+00	0	2.23E+02	0	0	8.08E-01	2.95E+01	1.20E+00	-1.02E+03
*Land use***	*Pt*	9.33E+02	3.59E+01	6.97E-01	0	1.15E+02	0	0	1.79E+00	1.39E+01	6.42E-01	-3.62E+02

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ADDITIONAL ENVIRONMENTAL IMPACTS ***per 1 pc (7,59 m²) of Unirol 130 with electric motor***

Impact category	Unit	A1-A3	A4	A5	B1-B5	B6	B7	C1	C2	C3	C4	D
Particulate matter	disease inc.	3.53E-05	6.05E-07	3.20E-08	0	6.20E-07	0	0	3.02E-08	3.70E-07	3.79E-09	-2.47E-05
Ionising radiation	kBq U-235 eq	3.66E+01	1.50E-01	2.20E-02	0	2.64E+01	0	0	7.49E-03	2.58E-01	2.88E-03	-2.28E+01
Human toxicity, non-cancer**	CTUh	6.51E-06	7.48E-08	7.87E-09	0	6.74E-07	0	0	3.74E-09	1.31E-07	3.91E-09	-3.51E-06
Human toxicity, cancer**	CTUh	4.90E-06	5.84E-08	3.45E-09	0	8.77E-08	0	0	2.91E-09	2.56E-08	1.61E-10	-4.11E-06
Ecotoxicity, freshwater	CTUe	3.69E+03	3.15E+01	2.32E+00	0	2.23E+02	0	0	1.57E+00	4.60E+01	2.33E+00	-2.19E+03
Land use**	Pt	1.60E+03	6.98E+01	1.31E+00	0	1.15E+02	0	0	3.49E+00	2.52E+01	1.25E+00	-6.97E+02

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CORE ENVIRONMENTAL IMPACTS ***per 1 pc (7,56 m²) of Unirol 150 with electric motor***

Impact category	Unit	A1-A3	A4	A5	B1-B5	B6	B7	C1	C2	C3	C4	D
Particulate matter	disease inc.	3.83E-05	6.60E-07	3.19E-08	0	6.20E-07	0	0	3.30E-08	3.97E-07	4.14E-09	-2.76E-05
Ionising radiation	kBq U-235 eq	3.92E+01	1.63E-01	2.19E-02	0	2.64E+01	0	0	8.18E-03	2.87E-01	3.15E-03	-2.52E+01
Human toxicity, non-cancer**	CTUh	6.96E-06	8.16E-08	7.83E-09	0	6.74E-07	0	0	4.08E-09	1.41E-07	4.28E-09	-3.91E-06
Human toxicity, cancer**	CTUh	5.35E-06	6.36E-08	3.43E-09	0	8.77E-08	0	0	3.18E-09	2.80E-08	1.76E-10	-4.53E-06
Ecotoxicity, freshwater	CTUe	3.98E+03	3.43E+01	2.31E+00	0	2.23E+02	0	0	1.72E+00	4.77E+01	2.54E+00	-2.42E+03
Land use**	Pt	1.68E+03	7.61E+01	1.30E+00	0	1.15E+02	0	0	3.81E+00	2.80E+01	1.36E+00	-7.76E+02

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.

** 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.*

*** Disclaimer: This impact category deals mainly with the eventual impact of low dose ionising 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 ionising radiation from the soil, from radon and from some construction materials is also not measured by this indicator.*

ADDITIONAL ENVIRONMENTAL IMPACTS ***per 1 pc (5,25 m²) of Unirol ZU with electric motor***

Impact category	Unit	A1-A3	A4	A5	B1-B5	B6	B7	C1	C2	C3	C4	D
Particulate matter	disease inc.	2.74E-05	4.43E-07	2.22E-08	0	6.20E-07	0	0	2.21E-08	3.27E-07	2.77E-09	-1.96E-05
Ionising radiation	kBq U-235 eq	2.84E+01	1.10E-01	1.52E-02	0	2.64E+01	0	0	5.48E-03	2.14E-01	2.11E-03	-1.85E+01
Human toxicity, non-cancer**	CTUh	5.14E-06	5.48E-08	5.44E-09	0	6.74E-07	0	0	2.73E-09	1.12E-07	2.86E-09	-2.71E-06
Human toxicity, cancer**	CTUh	3.12E-06	4.27E-08	2.39E-09	0	8.77E-08	0	0	2.13E-09	2.16E-08	1.18E-10	-2.52E-06
Ecotoxicity, freshwater	CTUe	2.55E+03	2.30E+01	1.61E+00	0	2.23E+02	0	0	1.15E+00	4.01E+01	1.70E+00	-1.52E+03
Land use**	Pt	1.21E+03	5.11E+01	9.06E-01	0	1.15E+02	0	0	2.55E+00	2.09E+01	9.13E-01	-5.47E+02

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.

** 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.*

*** Disclaimer: This impact category deals mainly with the eventual impact of low dose ionising 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 ionising radiation from the soil, from radon and from some construction materials is also not measured by this indicator.*

USE OF RESOURCES ***per 1 pc (1,95 m^2) of Unirol 80 without electric motor***

Impact category	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	MJ, net calorific value	1.01E+02	6.30E-01	8.98E-02	0	0	3.12E-02	1.78E+00	1.70E-02	-6.42E+01
Use of renewable primary energy resources used as raw materials	MJ, net calorific value	0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ, net calorific value	1.01E+02	6.30E-01	8.98E-02	0	0	3.12E-02	1.78E+00	1.70E-02	-6.42E+01
Use of non- renewable primary energy excluding non-renewable primary energy resources used as raw materials	MJ, net calorific value	2.20E+03	3.67E+01	2.92E-01	0	0	1.82E+00	1.18E+01	1.82E-01	-1.82E+03
Use of non- renewable primary energy resources used as raw materials	MJ, net calorific value	0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of non- renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ, net calorific value	2.20E+03	3.67E+01	2.92E-01	0	0	1.82E+00	1.18E+01	1.82E-01	-1.82E+03
Use of secondary material	kg	1.48E+00	1.70E-02	1.24E-03	0	0	8.43E-04	8.73E-03	6.92E-05	-1.28E+00
Use of renewable secondary fuels	MJ, net calorific value	2.57E-01	2.15E-04	7.71E-06	0	0	1.07E-05	2.87E-04	1.11E-06	-2.81E-03
Use of non renewable secondary fuels	MJ, net calorific value	0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of net fresh water	m^3	7.52E-01	5.10E-03	3.76E-04	0	0	2.52E-04	1.22E-02	-3.07E-03	-5.29E-01

USE OF RESOURCES ***per 1 pc (1,95 m^2) of Unirol 80 with electric motor***

Impact category	Unit	A1-A3	A4	A5	B1-B5	B6	B7	C1	C2	C3	C4	D
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	MJ, net calorific value	1.23E+02	6.64E-01	9.37E-02	0	7.78E+01	0	0	3.30E-02	1.80E+00	1.78E-02	-5.75E+01
Use of renewable primary energy resources used as raw materials	MJ, net calorific value	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ, net calorific value	1.23E+02	6.64E-01	9.37E-02	0	7.78E+01	0	0	3.30E-02	1.80E+00	1.78E-02	-5.75E+01
Use of non- renewable primary energy excluding non-renewable primary energy resources used as raw materials	MJ, net calorific value	2.38E+03	3.87E+01	3.05E-01	0	1.01E+03	0	0	1.92E+00	1.21E+01	1.91E-01	-1.64E+03
Use of non- renewable primary energy resources used as raw materials	MJ, net calorific value	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of non- renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ, net calorific value	2.38E+03	3.87E+01	3.05E-01	0	1.01E+03	0	0	1.92E+00	1.21E+01	1.91E-01	-1.64E+03
Use of secondary material	kg	1.90E+00	1.79E-02	1.30E-03	0	9.83E-02	0	0	8.93E-04	8.45E-03	7.27E-05	-1.01E+00
Use of renewable secondary fuels	MJ, net calorific value	2.69E-01	2.27E-04	8.05E-06	0	8.46E-04	0	0	1.13E-05	2.74E-04	1.16E-06	-2.45E-03
Use of non renewable secondary fuels	MJ, net calorific value	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of net fresh water	m^3	8.92E-01	5.37E-03	3.92E-04	0	6.45E-01	0	0	2.67E-04	1.27E-02	-3.22E-03	-4.75E-01

USE OF RESOURCES ***per 1 pc (4,04 m²) of Unirol 100 without electric motor***

Impact category	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	MJ, net calorific value	1.63E+02	9.89E-01	1.88E-01	0	0	4.95E-02	2.28E+00	2.68E-02	-8.78E+01
Use of renewable primary energy resources used as raw materials	MJ, net calorific value	0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ, net calorific value	1.63E+02	9.89E-01	1.88E-01	0	0	4.95E-02	2.28E+00	2.68E-02	-8.78E+01
Use of non- renewable primary energy excluding non-renewable primary energy resources used as raw materials	MJ, net calorific value	3.11E+03	5.76E+01	6.13E-01	0	0	2.89E+00	1.53E+01	2.87E-01	-2.38E+03
Use of non- renewable primary energy resources used as raw materials	MJ, net calorific value	0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of non- renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ, net calorific value	3.11E+03	5.76E+01	6.13E-01	0	0	2.89E+00	1.53E+01	2.87E-01	-2.38E+03
Use of secondary material	kg	3.15E+00	2.67E-02	2.60E-03	0	0	1.34E-03	1.14E-02	1.09E-04	-2.72E+00
Use of renewable secondary fuels	MJ, net calorific value	5.36E-01	3.38E-04	1.62E-05	0	0	1.69E-05	3.77E-04	1.74E-06	-4.25E-03
Use of non renewable secondary fuels	MJ, net calorific value	0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of net fresh water	m^3	1.17E+00	8.00E-03	7.88E-04	0	0	4.01E-04	1.77E-02	-4.84E-03	-7.22E-01

USE OF RESOURCES ***per 1 pc (4,04 m^2) of Unirol 100 with motor***

Impact category	Unit	A1-A3	A4	A5	B1-B5	B6	B7	C1	C2	C3	C4	D
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	MJ, net calorific value	1.96E+02	1.02E+00	1.95E-01	0	7.78E+01	0	0	5.09E-02	2.39E+00	2.75E-02	-8.48E+01
Use of renewable primary energy resources used as raw materials	MJ, net calorific value	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ, net calorific value	1.96E+02	1.02E+00	1.95E-01	0	7.78E+01	0	0	5.09E-02	2.39E+00	2.75E-02	-8.48E+01
Use of non- renewable primary energy excluding non-renewable primary energy resources used as raw materials	MJ, net calorific value	3.51E+03	5.95E+01	6.33E-01	0	1.01E+03	0	0	2.97E+00	1.63E+01	2.95E-01	-2.30E+03
Use of non- renewable primary energy resources used as raw materials	MJ, net calorific value	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of non- renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ, net calorific value	3.51E+03	5.95E+01	6.33E-01	0	1.01E+03	0	0	2.97E+00	1.63E+01	2.95E-01	-2.30E+03
Use of secondary material	kg	3.63E+00	2.76E-02	2.69E-03	0	9.83E-02	0	0	1.38E-03	1.16E-02	1.12E-04	-2.57E+00
Use of renewable secondary fuels	MJ, net calorific value	5.68E-01	3.49E-04	1.67E-05	0	8.46E-04	0	0	1.74E-05	3.77E-04	1.79E-06	-4.08E-03
Use of non renewable secondary fuels	MJ, net calorific value	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of net fresh water	m^3	1.38E+00	8.27E-03	8.14E-04	0	6.45E-01	0	0	4.12E-04	1.85E-02	-4.97E-03	-6.97E-01

USE OF RESOURCES ***per 1 pc (7,59 m^2) of Unirol 130 with motor***

Impact category	Unit	A1-A3	A4	A5	B1-B5	B6	B7	C1	C2	C3	C4	D
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	MJ, net calorific value	3.42E+02	1.98E+00	3.65E-01	0	7.78E+01	0	0	9.91E-02	4.25E+00	5.35E-02	-1.64E+02
Use of renewable primary energy resources used as raw materials	MJ, net calorific value	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ, net calorific value	3.42E+02	1.98E+00	3.65E-01	0	7.78E+01	0	0	9.91E-02	4.25E+00	5.35E-02	-1.64E+02
Use of non- renewable primary energy excluding non-renewable primary energy resources used as raw materials	MJ, net calorific value	6.22E+03	1.16E+02	1.19E+00	0	1.01E+03	0	0	5.77E+00	2.84E+01	5.74E-01	-4.34E+03
Use of non- renewable primary energy resources used as raw materials	MJ, net calorific value	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of non- renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ, net calorific value	6.22E+03	1.16E+02	1.19E+00	0	1.01E+03	0	0	5.77E+00	2.84E+01	5.74E-01	-4.34E+03
Use of secondary material	kg	7.84E+00	5.37E-02	5.05E-03	0	9.83E-02	0	0	2.68E-03	2.06E-02	2.18E-04	-6.34E+00
Use of renewable secondary fuels	MJ, net calorific value	1.04E+00	6.78E-04	3.14E-05	0	8.46E-04	0	0	3.39E-05	6.73E-04	3.49E-06	-8.53E-03
Use of non renewable secondary fuels	MJ, net calorific value	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of net fresh water	m^3	2.41E+00	1.61E-02	1.53E-03	0	6.45E-01	0	0	8.02E-04	3.00E-02	-9.67E-03	-1.35E+00

USE OF RESOURCES ***per 1 pc (7,56 m^2) of Unirol 150***

Impact category	Unit	A1-A3	A4	A5	B1-B5	B6	B7	C1	C2	C3	C4	D
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	MJ, net calorific value	3.62E+02	2.16E+00	3.63E-01	0	7.78E+01	0	0	1.08E-01	4.72E+00	5.85E-02	-1.82E+02
Use of renewable primary energy resources used as raw materials	MJ, net calorific value	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ, net calorific value	3.62E+02	2.16E+00	3.63E-01	0	7.78E+01	0	0	1.08E-01	4.72E+00	5.85E-02	-1.82E+02
Use of non- renewable primary energy excluding non-renewable primary energy resources used as raw materials	MJ, net calorific value	6.72E+03	1.26E+02	1.18E+00	0	1.01E+03	0	0	6.31E+00	3.13E+01	6.27E-01	-4.83E+03
Use of non- renewable primary energy resources used as raw materials	MJ, net calorific value	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of non- renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ, net calorific value	6.72E+03	1.26E+02	1.18E+00	0	1.01E+03	0	0	6.31E+00	3.13E+01	6.27E-01	-4.83E+03
Use of secondary material	kg	8.52E+00	5.85E-02	5.03E-03	0	9.83E-02	0	0	2.93E-03	2.26E-02	2.38E-04	-6.98E+00
Use of renewable secondary fuels	MJ, net calorific value	1.04E+00	7.39E-04	3.12E-05	0	8.46E-04	0	0	3.70E-05	7.41E-04	3.81E-06	-9.46E-03
Use of non renewable secondary fuels	MJ, net calorific value	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of net fresh water	m^3	2.56E+00	1.75E-02	1.52E-03	0	6.45E-01	0	0	8.76E-04	3.16E-02	-1.06E-02	-1.50E+00

USE OF RESOURCES ***per 1 pc (5,25 m^2) of Unirol ZU with motor***

Impact category	Unit	A1-A3	A4	A5	B1-B5	B6	B7	C1	C2	C3	C4	D
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	MJ, net calorific value	2.55E+02	1.45E+00	2.53E-01	0	7.78E+01	0	0	7.25E-02	3.54E+00	3.92E-02	-1.28E+02
Use of renewable primary energy resources used as raw materials	MJ, net calorific value	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ, net calorific value	2.55E+02	1.45E+00	2.53E-01	0	7.78E+01	0	0	7.25E-02	3.54E+00	3.92E-02	-1.28E+02
Use of non- renewable primary energy excluding non-renewable primary energy resources used as raw materials	MJ, net calorific value	4.85E+03	8.46E+01	8.23E-01	0	1.01E+03	0	0	4.22E+00	2.38E+01	4.20E-01	-3.49E+03
Use of non- renewable primary energy resources used as raw materials	MJ, net calorific value	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of non- renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ, net calorific value	4.85E+03	8.46E+01	8.23E-01	0	1.01E+03	0	0	4.22E+00	2.38E+01	4.20E-01	-3.49E+03
Use of secondary material	kg	4.92E+00	3.93E-02	3.49E-03	0	9.83E-02	0	0	1.96E-03	1.72E-02	1.60E-04	-3.75E+00
Use of renewable secondary fuels	MJ, net calorific value	7.25E-01	4.97E-04	2.17E-05	0	8.46E-04	0	0	2.48E-05	5.61E-04	2.55E-06	-6.11E-03
Use of non renewable secondary fuels	MJ, net calorific value	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of net fresh water	m^3	1.80E+00	1.18E-02	1.06E-03	0	6.45E-01	0	0	5.87E-04	2.59E-02	-7.08E-03	-1.05E+00

WASTE PRODUCTION and OUTPUT FLOWS *per 1 pc (1,95 m^2) Unirol 80 without electric motor*

Impact category	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Hazardous waste	kg	4.19E+01	5.36E-02	4.48E-03	0	0	2.65E-03	2.44E-01	3.77E-04	-3.87E+01
Non-hazardous waste disposed	kg	5.52E+02	1.13E+00	1.44E-01	0	0	5.60E-02	6.59E+00	4.02E+00	-4.46E+02
Radioactive waste disposed/stored	kg	2.92E-03	1.18E-05	1.30E-06	0	0	5.86E-07	2.79E-05	2.10E-07	-2.33E-03
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	1.09E+00	2.79E-04	9.01E-01	0	0	1.38E-05	7.14E+00	1.19E-05	-6.95E-02
Materials for energy recovery	kg	9.52E-05	2.36E-06	1.07E-07	0	0	1.17E-07	1.07E-06	5.22E-09	-7.01E-05
Exported energy - electricity	MJ per energy carrier	2.30E-01	6.32E-03	9.23E-04	0	0	3.13E-04	2.54E-01	1.37E-04	-1.08E-01
Exported energy - heat	MJ per energy carrier	6.18E-01	9.14E-03	1.01E-04	0	0	4.52E-04	8.86E-02	1.06E-03	-1.26E-01

WASTE PRODUCTION and OUTPUT FLOWS *per 1 pc (1,95 m^2) Unirol 80 with electric motor*

Impact category	Unit	A1-A3	A4	A5	B1-B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste	kg	4.50E+01	5.64E-02	4.68E-03	0	1.78E+00	0	0	2.81E-03	2.49E-01	3.96E-04	-3.47E+01
Non-hazardous waste disposed	kg	6.39E+02	1.19E+00	1.51E-01	0	4.34E+02	0	0	5.93E-02	6.86E+00	4.22E+00	-4.01E+02
Radioactive waste disposed/stored	kg	5.20E-03	1.25E-05	1.36E-06	0	6.35E-03	0	0	6.20E-07	2.74E-05	2.20E-07	-2.12E-03
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	1.37E+00	2.94E-04	9.41E-01	0	5.89E-02	0	0	1.46E-05	6.56E+00	1.25E-05	-6.29E-02
Materials for energy recovery	kg	1.46E-04	2.49E-06	1.11E-07	0	1.01E-05	0	0	1.24E-07	1.08E-06	5.48E-09	-6.02E-05
Exported energy - electricity	MJ per energy carrier	3.09E-01	6.65E-03	9.64E-04	0	5.54E-01	0	0	3.31E-04	2.33E-01	1.44E-04	-9.72E-02
Exported energy - heat	MJ per energy carrier	6.23E-01	9.63E-03	1.05E-04	0	1.33E-01	0	0	4.79E-04	8.18E-02	1.11E-03	-1.10E-01

WASTE PRODUCTION and OUTPUT FLOWS *per 1 pc (4,04 m²) Unirol 100 without electric motor*

Impact category	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Hazardous waste	kg	5.71E+01	8.40E-02	9.41E-03	0	0	4.21E-03	3.44E-01	5.94E-04	-5.14E+01
Non-hazardous waste disposed	kg	7.84E+02	1.78E+00	3.03E-01	0	0	8.89E-02	9.29E+00	6.33E+00	-5.97E+02
Radioactive waste disposed/stored	kg	4.25E-03	1.86E-05	2.74E-06	0	0	9.30E-07	3.57E-05	3.30E-07	-3.06E-03
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	2.22E+00	4.38E-04	1.89E+00	0	0	2.19E-05	9.07E+00	1.88E-05	-8.98E-02
Materials for energy recovery	kg	1.63E-04	3.71E-06	2.24E-07	0	0	1.86E-07	1.41E-06	8.22E-09	-1.13E-04
Exported energy - electricity	MJ per energy carrier	4.05E-01	9.91E-03	1.94E-03	0	0	4.96E-04	3.24E-01	2.16E-04	-1.57E-01
Exported energy - heat	MJ per energy carrier	1.29E+00	1.43E-02	2.12E-04	0	0	7.19E-04	1.13E-01	1.67E-03	-1.97E-01

WASTE PRODUCTION and OUTPUT FLOWS *per 1 pc (4,04 m²) Unirol 100 with electric motor*

Impact category	Unit	A1-A3	A4	A5	B1-B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste	kg	6.30E+01	8.68E-02	9.72E-03	0	1.78E+00	0	0	4.33E-03	3.57E-01	6.10E-04	-4.96E+01
Non-hazardous waste disposed	kg	9.22E+02	1.83E+00	3.13E-01	0	4.34E+02	0	0	9.14E-02	9.78E+00	6.51E+00	-5.77E+02
Radioactive waste disposed/stored	kg	6.76E-03	1.92E-05	2.83E-06	0	6.35E-03	0	0	9.56E-07	3.66E-05	3.39E-07	-2.97E-03
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	2.57E+00	4.52E-04	1.95E+00	0	5.89E-02	0	0	2.25E-05	8.86E+00	1.93E-05	-8.69E-02
Materials for energy recovery	kg	2.29E-04	3.83E-06	2.31E-07	0	1.01E-05	0	0	1.91E-07	1.47E-06	8.45E-09	-1.08E-04
Exported energy - electricity	MJ per energy carrier	5.28E-01	1.02E-02	2.00E-03	0	5.54E-01	0	0	5.10E-04	3.16E-01	2.22E-04	-1.53E-01
Exported energy - heat	MJ per energy carrier	1.37E+00	1.48E-02	2.19E-04	0	1.33E-01	0	0	7.39E-04	1.10E-01	1.72E-03	-1.88E-01

WASTE PRODUCTION and OUTPUT FLOWS *per 1 pc (7,59 m²) Unirol 130 with electric motor*

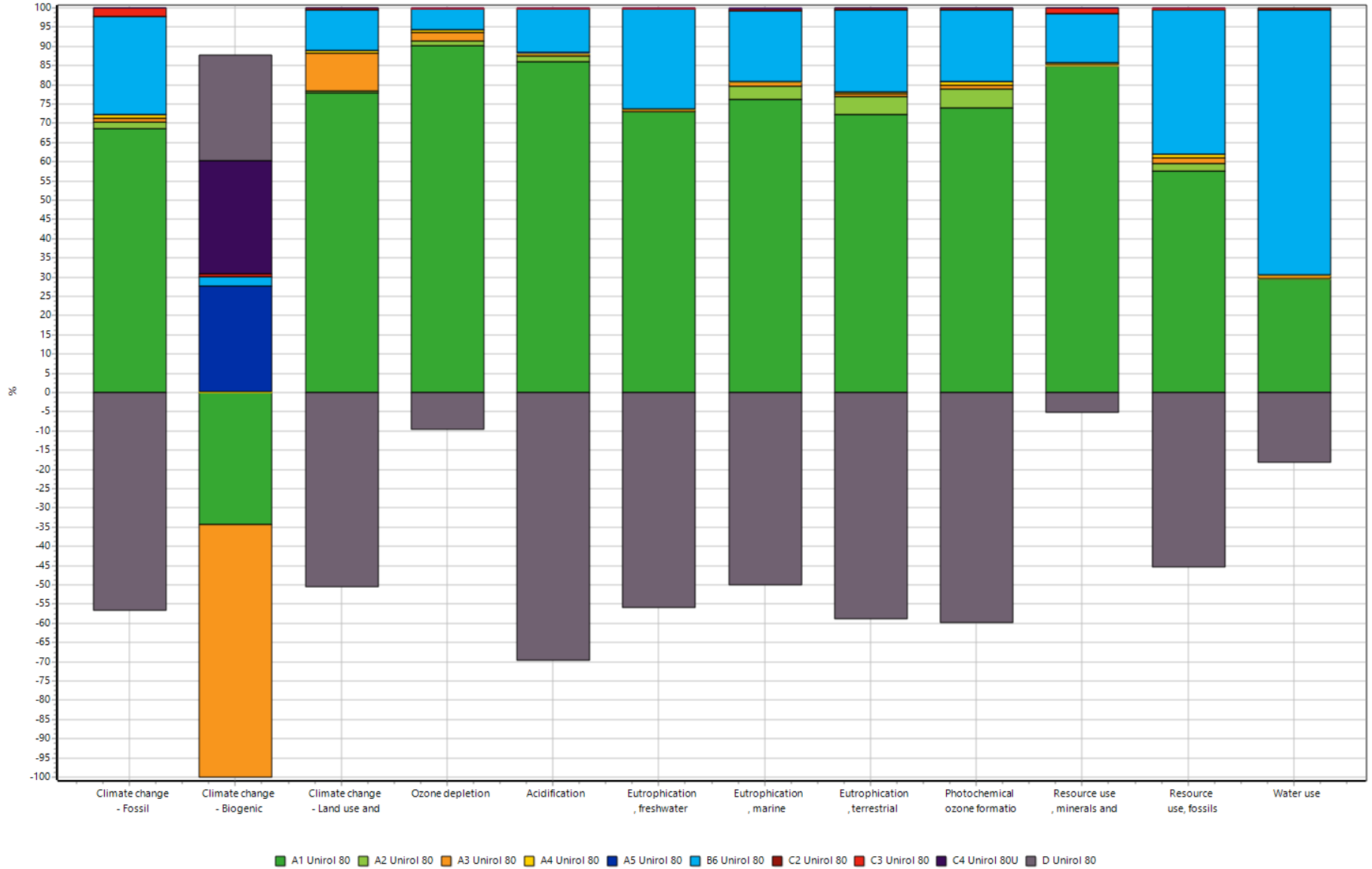
Impact category	Unit	A1-A3	A4	A5	B1-B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste	kg	1.17E+02	1.69E-01	1.83E-02	0	1.78E+00	0	0	8.42E-03	5.95E-01	1.19E-03	-9.54E+01
Non-hazardous waste disposed	kg	1.60E+03	3.56E+00	5.87E-01	0	4.34E+02	0	0	1.78E-01	1.62E+01	1.27E+01	-1.10E+03
Radioactive waste disposed/stored	kg	1.05E-02	3.73E-05	5.31E-06	0	6.35E-03	0	0	1.86E-06	6.59E-05	6.60E-07	-5.47E-03
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	4.55E+00	8.79E-04	3.67E+00	0	5.89E-02	0	0	4.39E-05	1.64E+01	3.75E-05	-1.62E-01
Materials for energy recovery	kg	3.94E-04	7.45E-06	4.34E-07	0	1.01E-05	0	0	3.72E-07	2.57E-06	1.64E-08	-2.36E-04
Exported energy - electricity	MJ per energy carrier	8.58E-01	1.99E-02	3.75E-03	0	5.54E-01	0	0	9.93E-04	5.84E-01	4.32E-04	-2.95E-01
Exported energy - heat	MJ per energy carrier	2.63E+00	2.88E-02	4.11E-04	0	1.33E-01	0	0	1.44E-03	2.04E-01	3.34E-03	-3.98E-01

WASTE PRODUCTION and OUTPUT FLOWS *per 1 pc (7,56 m²) Unirol 150 with electric motor*

Impact category	Unit	A1-A3	A4	A5	B1-B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste	kg	1.29E+02	1.84E-01	1.82E-02	0	1.78E+00	0	0	9.20E-03	6.34E-01	1.30E-03	-1.06E+02
Non-hazardous waste disposed	kg	1.74E+03	3.88E+00	5.84E-01	0	4.34E+02	0	0	1.94E-01	1.72E+01	1.38E+01	-1.23E+03
Radioactive waste disposed/stored	kg	1.12E-02	4.06E-05	5.28E-06	0	6.35E-03	0	0	2.03E-06	7.32E-05	7.22E-07	-6.06E-03
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	4.56E+00	9.58E-04	3.65E+00	0	5.89E-02	0	0	4.79E-05	1.83E+01	4.10E-05	-1.80E-01
Materials for energy recovery	kg	4.23E-04	8.11E-06	4.32E-07	0	1.01E-05	0	0	4.06E-07	2.82E-06	1.80E-08	-2.61E-04
Exported energy - electricity	MJ per energy carrier	8.97E-01	2.17E-02	3.74E-03	0	5.54E-01	0	0	1.08E-03	6.51E-01	4.72E-04	-3.24E-01
Exported energy - heat	MJ per energy carrier	2.83E+00	3.14E-02	4.08E-04	0	1.33E-01	0	0	1.57E-03	2.27E-01	3.65E-03	-4.40E-01

WASTE PRODUCTION and OUTPUT FLOWS *per 1 pc (5,25 m^2) Unirol ZU with electric motor*

Impact category	Unit	A1-A3	A4	A5	B1-B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste	kg	9.18E+01	1.23E-01	1.26E-02	0	1.78E+00	0	0	6.16E-03	5.08E-01	8.69E-04	-7.54E+01
Non-hazardous waste disposed	kg	1.27E+03	2.61E+00	4.06E-01	0	4.34E+02	0	0	1.30E-01	1.38E+01	9.26E+00	-8.71E+02
Radioactive waste disposed/stored	kg	8.57E-03	2.73E-05	3.67E-06	0	6.35E-03	0	0	1.36E-06	5.47E-05	4.83E-07	-4.45E-03
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	3.25E+00	6.43E-04	2.54E+00	0	5.89E-02	0	0	3.21E-05	1.35E+01	2.74E-05	-1.32E-01
Materials for energy recovery	kg	2.82E-04	5.45E-06	3.01E-07	0	1.01E-05	0	0	2.72E-07	2.16E-06	1.20E-08	-1.61E-04
Exported energy - electricity	MJ per energy carrier	6.09E-01	1.46E-02	2.60E-03	0	5.54E-01	0	0	7.26E-04	4.81E-01	3.16E-04	-2.23E-01
Exported energy - heat	MJ per energy carrier	1.15E+00	2.11E-02	2.84E-04	0	1.33E-01	0	0	1.05E-03	1.68E-01	2.44E-03	-2.81E-01



Method: EN 15804 + A2 LCIA & LCI indicators V1.00 / EN 15804 official / Characterization
Analyzing 1 p 'Unirol 80';

Other Environmental Performance Indicators

None included

Additional Environmental Information

None included

Additional Social and Economic Information

None included

Information Related to Sector EPD

Not applicable

References

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)

ISO 14044:2006-10, Environmental Management — Life Cycle Assessment — Requirements and Instructions (ISO 14044:2006); EN ISO 14044:2006

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