

ENVIRONMENTAL PRODUCT DECLARATION

PRODUCT NAME	PLANTS
<p>Washbasins</p> <p>Shower trays</p> <p>Bathtub B16</p> <p>Bathtub F16</p> <p>Bathtub S16</p>	<p>NICOS INTERNATIONAL S.p.A.</p> <p>Via Bastie, 44 - 31040 Portobuffolè, Treviso (TV) Italy</p> <p>Via Sagree, 20 - 33080 Prata di Pordenone (PN) Italy</p>

in compliance with ISO 14025 and EN 15804:2012+A2:2019

Program Operator	EPDIItaly
Publisher	EPDIItaly

Declaration Number	SANNIC01
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GENERAL INFORMATION ON THE PROGRAM AND AUDIT

EPD owner:	NICOS INTERNATIONAL S.p.A. Via Bastie, 44 - Zona Industriale, 31040 Portobuffolè (TV) Tel. +39 0422 504411 P.IVA 02008070266
Plants involved in the EPD:	PORTOBUFFOLE' plant (TV) Via Bastie, 44 - Zona Industriale, 31040 Portobuffolè (TV) PRATA DI PORDENONE plant (PN) Via Sagree, 20 - 33080 Prata di Pordenone (PN)
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Field of application:	Washbasins, Shower trays and Bathtubs
Products:	WHITE WASHBASINS WHITE SHOWER TRAYS BATHTUBS B16 BATHTUBS F16 BATHTUBS S16
CPS code:	36930
Program Operator:	EPDItaly (www.epditaly.it) Via Gaetano de Castillia n° 10 - 20124 Milano, Italia
Independent audit:	The declaration complies with ISO 14025 and EN 15804:2012+ A2:2019 and PCR ICMQ-001/15 standards. Independent external audit of the declaration and data carried out in compliance with EN ISO 14025:2020. Carried out by ICMQ (www.icmq.it) Via Gaetano de Castillia n° 10 - 20124 Milan, Italy. Licensed by ACCREDIA
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LCA study carried out by:	Ing. Lorenzo Corona – TECNO S.r.l. Via Correggio 3 - 20149 Milano (MI) l.corona@tecnoesg.it
Comparability:	Environmental claims published within the same product category, but from different programs, may not be comparable. In particular, EPDs of construction products may not be comparable if they do not comply with EN 15804:2012+A2:2019.
Responsibility:	Nicos International S.p.A. releases EPDItaly from any non-compliance with the environmental legislation self-declared by the manufacturer himself. The declaration holder will be responsible for the information and supporting evidence; EPDItaly accepts no responsibility regarding the information of the manufacturer, the data and the results of the life cycle assessment.
Reference documents:	Regulation of the EPDItaly Program rev.5.2 ISO 14025:2010
Reference PCR:	PCR for construction products: ICMQ-001/15 rev 3 EN 15804:2012+A2:2019

The Company

Nicos is an OEM (Original Equipment Manufacturer) European leader in the development and production of solid surface and cast marble products, recognized worldwide for their high quality. It operates in the B2B sector, using materials for the creation of washbasins, shower trays and bathtubs that it develops together with its partners in standard, bespoke and private label modes.

In over twenty years, it has grown parallel to the bathroom furniture market, responding to the new needs that this segment has requested thanks to new services, the opening of latest generation production lines and acquisitions of companies, expanding its offer and improving its logistical positioning on the European territory.

Nicos International includes 3 production plants and 2 logistical sites for a total of 65,000 m². The headquarters and production hub of Portobuffolè (TV) is the number 1 production site with a surface of 16,400 m². The number 2 production site and logistical centre is in Prata di Pordenone (PN) and has a surface of 20,000 m².



Figure 1: Portobuffolè (TV) Nicos International plant - UP1.



Figure 2: Prata di Pordenone (PN) Nicos International plant - UP2.

Objective and purpose of the EPD

This Environmental Product Declaration relates to 1 kg of washbasin, 1 kg of shower tray and 1 kg of bathtub manufactured by Nicos International in the Portobuffolè (UP1) and Prata di Pordenone (UP2) plants.

The life cycle stages included in the study are schematically represented in Table 1. The approach followed takes into account the life cycle of the products analysed “from cradle to gate with options”, i.e. including modules C1-C4 and module D (A1-A3, A5 + C + D), i.e. starting from raw materials, to the production of the components, up to the decommissioning phase and subsequently to the treatment and disposal of the waste.

PRODUCTION PHASE			CONSTRUCTION PHASE		USE PHASE							END OF LIFE PHASE				RESOURCE RECOVERY PHASE
Supply of raw materials	Transport	Manufacturing	Transport	Construction - installation	Use	Maintenance	Repair	Replacement	Renovation	Energy consumption during use	Water consumption during use	De-construction, demolition	Transport	Waste treatment	Disposal	Potential for reuse - recovery - recycling
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
X	X	X	MND	X	MND	MND	MND	MND	MND	MND	MND	X	X	X	X	X

When a module is considered in the analysis, it is marked with an "X" in the last line.

When a module is not accounted for in the last row it is marked with "MND", i.e. not declared.

When a module is not relevant for environmental performance in the last row it is marked with "NR", not relevant.

Table 1: system boundaries.

The calculation software used in the study is SimaPro 9.4.0.1, supplied by PRé Consultants. The database of this model was implemented by the Ecoinvent 3.8 database and provided all the data relating to the production of fuels and electricity, the production of materials and transport.

SOFTWARE: SimaPro 9.4.0.1

DATABASE: Ecoinvent 3.8

GEOGRAPHICAL VALIDITY OF THE EPD: Italy and European countries depending on market conditions

EPD TYPE: Product EPD (Type III)

The products

CODE	DESCRIPTION	RANGE %
2140068	RESIN	18,82-22,82
2160023	DIBENZOYL PEROXIDE	0,49-0,89
2150356	CALCIUM CARBONATE	17,27-21,27
2150354	CALCIUM CARBONATE	41,88-45,88
2230001G	STYRENE	0,23-0,27
2170004	INHIBITOR	0,008-0,012
2140077	RESIN	0,4-0,8
2130404	TITANIUM OXIDE	0,32-0,72
2120050	GELCOAT	11,7-15,7
2160006	CATALYST	0,25-0,29

Table 2: range of composition % of Nicos white washbasins (UP1).

CODE	DESCRIPTION	RANGE %
2140068	RESIN	19,24-23,24
2160023	DIBENZOYL PEROXIDE	0,36-0,76
2150356	CALCIUM CARBONATE	21,12-25,12
2150354	CALCIUM CARBONATE	45,74-49,74
2230006	AMINE	0,018-0,022
2140077	RESIN	0,54-0,94
2130404	TITANIUM OXIDE	0,36-0,76
MGEL500P	GELCOAT	3,91-7,91
2160006	CATALYST	0,10-0,14

Table 3: range of composition % of white Nicos shower trays (UP1).

CODE	RAW MATERIALS	RANGE % S16	F16	B16
2210011	ATH (25 µm)	60,56-64,56	60,37-64,37	–
2210021	ATH (35 µm)	–	–	47,85-51,85
2141505	THERMOPLASTICS	–	–	1,06-1,46
2160006	ACTIVE OXYGEN	0,34-0,74	–	–
2160020	ACTIVE OXYGEN	–	0,53-0,93	0,65-1,05
2140055	RESIN	–	–	42,84-46,84
2140075	RESIN	30,38-34,38	30,38-34,38	–
2230012	ACRYLIC MONOMER	1,91-2,31	1,91-2,31	–
2230013	ACRYLIC MONOMER	0,69-0,73	0,506-0,906	–
2230022	ACRYLIC MONOMER	–	–	1,668-2,068
2380905	RHEOLOGY ADDITIVE	0,074-0,114	0,074-0,114	0,102-0,142
2380916	WETTING ADDITIVE	–	–	–
2380915	SILANE ADDITIVE	0,574-0,614	0,394-0,794	–
2170004	INHIBITOR	0,027-0,067	0,027-0,067	0,008-0,048
2170003	ACCELERANT	0,016-0,02	0,016-0,02	0,003-0,007
2170010	ACCELERANT	0,023-0,063	0,023-0,063	–
2170013	ACCELERANT	0,009-0,013	0,009-0,013	0,00013-0,00053
SOL.AZZG	STYRENE	0,023-0,063	0,023-0,063	0,112-0,152
2130401	TITANIUM OXIDE	0,49-0,53	0,31-0,71	0,423-0,823
2140061	RESIN	0,32-0,36	0,14-0,54	0,215-0,615
2380906	ADDITIVE	0,006-0,01	0,006-0,01	0,007-0,011

Table 4: range of composition % of bathtubs B16, F16 and S16 Nicos (UP2)

Production cycle

The diagram of the production cycle of Nicos washbasins and shower trays is shown below (Figure 3). The production diagram of the Nicos bathtubs is shown in Figure 4.

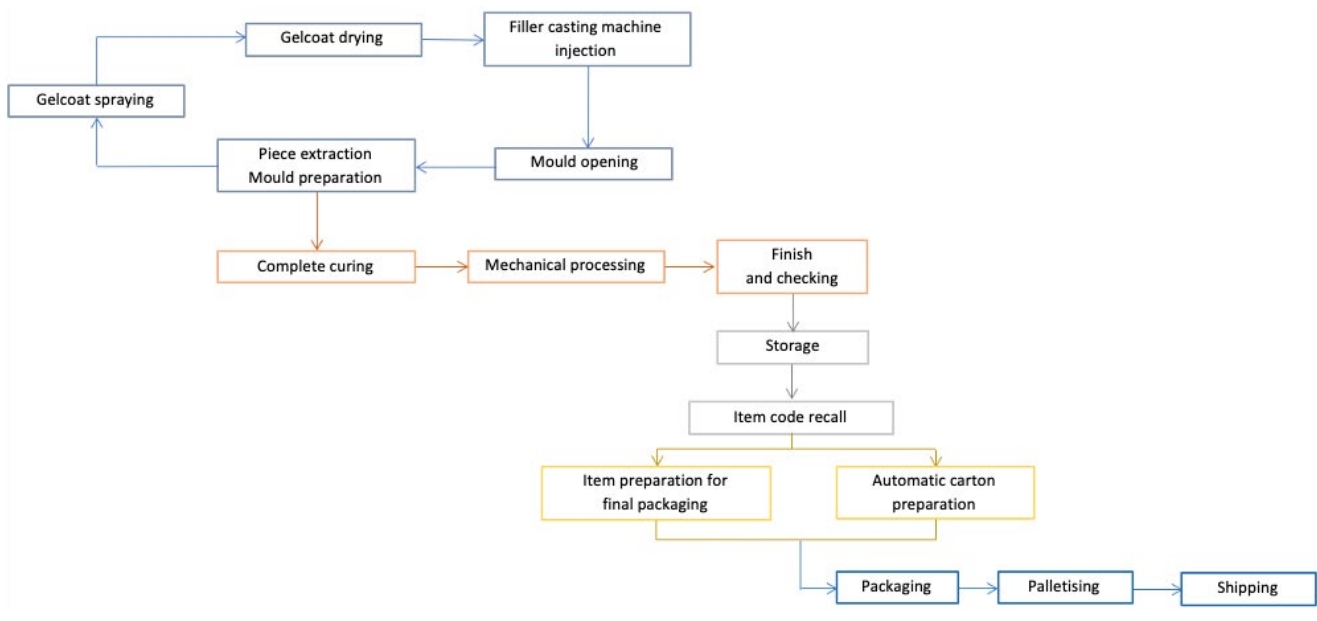


Figure 3: production cycle diagram of Nicos Mineralmarmo products.

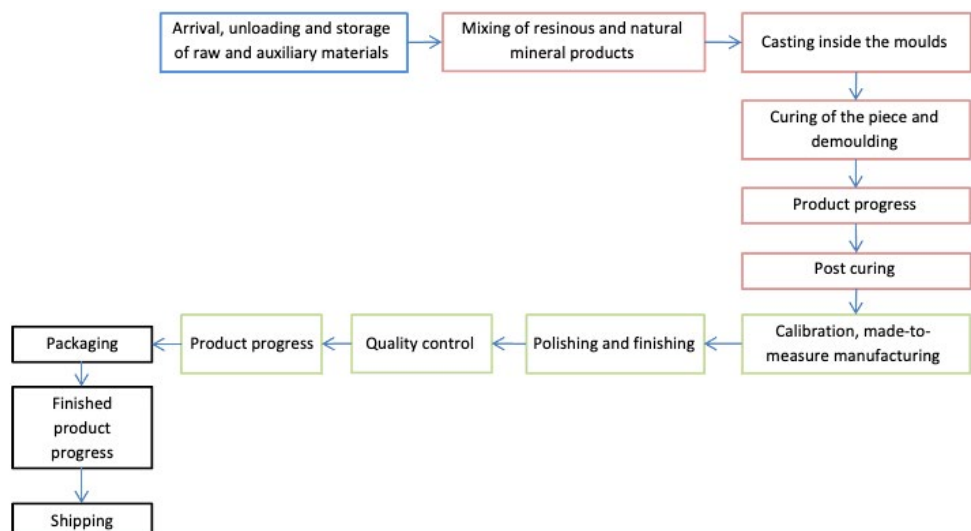


Figure 4: production cycle diagram of Nicos Cristalplant products

DECLARED UNIT

The declared unit for the following EPD is equal to 1 kilogram (kg) of washbasin, 1 kilogram (kg) of shower tray and 1 kilogram (kg) of bathtub, including the materials used for the packaging phase, produced in the facilities of Portobuffolè (TV) and Prata di Pordenone (PN), following a "from cradle to gate with options" approach.

EXAMINATION PERIOD

The primary data collected in the context of this study refer to the 2021 production year.

System boundaries

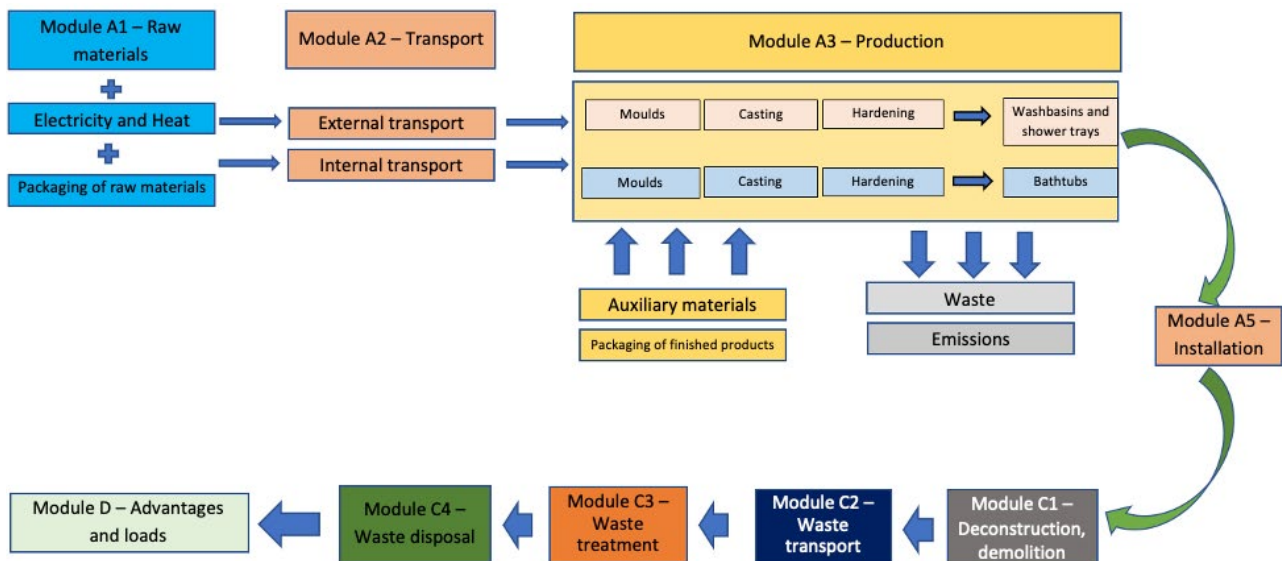


Figure 5: system boundaries of “one kilogram of washbasin, one kilogram of shower tray and one kilogram of bathtub”.

The following upstream processes are included within the life cycle of Nicos washbasins, shower trays and bathtubs:

A1) Procurement of raw materials (and related packaging):

- Extraction and processing of raw materials, production and transformation of biomass, recycling processes of secondary materials from a previous system of products, but not including those that are part of the waste;
- generation of electricity, steam and heat from primary energy resources, including their extraction, refining and transportation.

A quantity of raw materials greater than 95% of the total mass was considered as envisaged by the cut-off rules, which will be better detailed below.

A2) Transport:

- Transport of raw and auxiliary materials;
- Transport of the packaging of the finished product;
- Internal transport.

With regard to internal and external transport (A2), Nicos supplied the necessary data directly.

A3) Production:

- Auxiliary materials;
- Packaging of the finished product;
- Emissions during the production cycle;
- Waste produced from production to the final stage.

A5) Installation:

- Treatment of waste deriving from the packaging of the finished product;

End of life phase

The following end-of-life processes are included within the life cycle of Nicos washbasins, shower trays and bathtubs:

- C1) De-construction, Demolition: includes the "disassembly" of the product. The disposal (C1) is carried out manually, therefore the impact is negligible.
- C2) Transport: Transport to waste treatment and disposal: an average distance from the demolition site to the disposal centre was assumed to be 20 km, and from the treatment plant to the disposal plant of 20 km. For the waste transport phase, the return journey of the empty truck was not considered for the distances covered relating to phases C3 and C4.
- C3) Waste treatment: includes recycling of construction and demolition (C&D) waste and sending finished product packaging for recycling.
- C4) Disposal of final waste: it is considered negligible because there is no contribution that goes to landfill and/or incineration.

Module D

The benefits deriving from all the net flows in the end-of-life phase that leave the product system after having passed the waste phase are also considered, evaluated within module D. In this sense, modelling was carried out considering the data relating to inert waste from construction and demolition (C&D).

CUT-OFF RULES

The inventory data considered in the study represent at least 95% of the total inflows (mass and energy) of phases A1, A2 and A3. What is not included in the LCA has been specified. In particular, the packaging of auxiliary materials was excluded from the study and therefore included in the cut-offs. The contribution linked to emissions into the atmosphere reported with the minor symbol in the analyses of the fumes also falls within the cut-off threshold (for example this was found in the analyses of the Dusts of some emission points).

ALLOCATION RULES

In this study, an attempt has been made to divide the input and output data while maintaining the principle of modularity: the materials and energy flows to and from the environment are then assigned to the module in which they occur. No double counting has been done for inputs or outputs.

Specifically, starting from the materials used for each product studied, it was possible to allocate the input materials for the selected unit of analysis (kilogram of finished product), taking into account the incidence that the single raw material has with respect to the declared unit (DU).

As regards the production process understood as energy consumption, heat, auxiliary materials used, waste produced, emissions released into the environment, etc. the specific quantity was determined for each finished product investigated by dividing the total consumption by the total production of finished products of Nicos International stated for the plants. In this case, therefore, reference was made to the entire production of bathtubs, washbasins and shower trays in the Portobuffolè (UP1) and Prata di Pordenone (UP2) plants for the year 2021.

As regards the approach to waste destined for recycling/recovery, this study refers to what is stated in the PCR "ICMQ-001/15 rev 3" (in compliance with the EN 15804:2012+A2:2019 standard).

QUALITY OF THE DATA

For this LCA study, specific data (primary data) were used for the processes concerning the manufacturing phases inside the Nicos facilities in Portobuffolè (UP1) and Prata di Pordenone (UP2). The distances calculated by the suppliers of the raw materials used (primary data) are also specific data.

In cases where generic data have been used (e.g. for the schematization of the production processes associated with the various incoming materials), they have been chosen so that they are representative by geographical area and technological method.

For the disposal phase, hypotheses were made on specific scenarios deemed valid (secondary data).

Environmental impacts

The following Tables show the environmental impacts for the washbasin, shower tray and bathtub considered according to the EN 15804+A2 method. The calculation was carried out using the SimaPro 9 software with the data referring to the 2021 year of production.

The calculation of the "Waste production" values was carried out by applying the EDIP 2003 V1.07 method (Environmental Design of Industrial Products) within the SimaPro software.

PORTOBUFFOLE' PLANT (UP1)

WHITE WASHBASINS Results for 1 kilogram (kg) of product

IMPACT CATEGORIES	U.M.	PRODUCTION PHASE			INSTALLATION PHASE	END OF LIFE				MODULE D	TOTAL
		A1	A2	A3	A5	C1	C2	C3	C4	D	
GWP-total	kg CO ₂ eq	1,54E+00	4,85E-02	3,12E-01	3,44E-03	0,00E+00	3,34E-03	4,00E-03	0,00E+00	-6,72E-03	1,91E+00
GWP-fossil	kg CO ₂ eq	1,53E+00	4,84E-02	4,82E-01	3,44E-03	0,00E+00	3,33E-03	4,00E-03	0,00E+00	-6,62E-03	2,07E+00
GWP-biogenic	kg CO ₂ eq	1,06E-02	2,39E-05	-1,71E-01	0,00E+00	0,00E+00	1,78E-06	1,11E-06	0,00E+00	-8,60E-05	-1,61E-01
GWP-luluc	kg CO ₂ eq	5,80E-04	2,08E-05	6,29E-04	2,94E-06	0,00E+00	1,17E-06	3,15E-07	0,00E+00	-8,76E-06	1,23E-03
ODP	kg CFC11 eq	1,93E-07	1,07E-08	3,32E-08	2,76E-10	0,00E+00	7,57E-10	8,64E-10	0,00E+00	-6,00E-10	2,39E-07
AP	mol H+ eq	7,20E-03	1,94E-04	8,98E-04	1,34E-05	0,00E+00	1,36E-05	4,19E-05	0,00E+00	-4,31E-05	8,37E-03
EP-freshwater	kg P eq	3,83E-04	4,13E-06	5,20E-05	8,41E-07	0,00E+00	2,44E-07	1,44E-07	0,00E+00	-4,06E-06	4,41E-04
EP-marine	kg N eq	1,17E-03	5,62E-05	3,28E-04	4,28E-06	0,00E+00	4,09E-06	1,85E-05	0,00E+00	-9,77E-06	1,58E-03
EP-terrestrial	mol N eq	1,25E-02	6,15E-04	2,29E-03	3,89E-05	0,00E+00	4,47E-05	2,03E-04	0,00E+00	-1,18E-04	1,57E-02
POCP	kg NMVOC eq	7,44E-03	1,89E-04	7,92E-04	1,16E-05	0,00E+00	1,37E-05	5,57E-05	0,00E+00	-2,99E-05	8,50E-03
ADP-minerals & metals**	kg Sb eq	1,43E-05	1,74E-06	8,49E-06	4,19E-08	0,00E+00	9,02E-08	6,14E-09	0,00E+00	-7,07E-07	2,47E-05
ADP-fossil**	MJ	3,53E+01	7,20E-01	2,55E+00	3,86E-02	0,00E+00	5,03E-02	5,51E-02	0,00E+00	-9,64E-02	3,87E+01
WDP	m ³ depriv.	5,60E-01	2,21E-03	-9,80E-02***	4,88E-04	0,00E+00	1,40E-04	7,38E-05	0,00E+00	-1,13E-02	4,65E-01

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

*** The negative value is given by the contribution of emissions to water present within the dataset relating to the treatment and purification of waste water.

CONSUMPTION OF RESOURCES AND OUTPUT	U.M.	PRODUCTION PHASE			INSTALLATION PHASE	END OF LIFE				MODULE D	TOTAL
		A1	A2	A3	A5	C1	C2	C3	C4	D	
PERE	MJ	4,46E-01	1,22E-02	1,22E+00	2,59E-03	0,00E+00	7,09E-04	2,79E-03	0,00E+00	-8,63E-03	1,69E+00
PERM	MJ	0,00E+00	0,00E+00	1,53E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,53E+00
PERT	MJ	4,46E-01	1,22E-02	2,75E+00	2,59E-03	0,00E+00	7,09E-04	2,79E-03	0,00E+00	-8,63E-03	3,22E+00
PENRE	MJ	9,83E+00	7,20E-01	2,29E+00	3,86E-02	0,00E+00	5,03E-02	9,26E-02	0,00E+00	-9,64E-02	1,30E+01
PENRM	MJ	1,03E+01	0,00E+00	2,64E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,06E+01
PENRT	MJ	2,01E+01	7,20E-01	2,55E+00	3,86E-02	0,00E+00	5,03E-02	9,26E-02	0,00E+00	-9,64E-02	2,36E+01
SM	kg	5,72E-03	1,64E-04	9,64E-02	6,74E-02	0,00E+00	9,90E-06	6,33E-02	0,00E+00	0,00E+00	2,33E-01
CRU	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	3,08E-04	0,00E+00
MFR	kg	0,00E+00	0,00E+00	2,67E-01	9,26E-02	0,00E+00	0,00E+00	8,68E-02	0,00E+00	0,00E+00	4,46E-01
MER	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
EEE	MJ	0,00E+00	0,00E+00	2,33E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,33E-01
EET	MJ	0,00E+00	0,00E+00	3,20E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,20E-02
FW	m ³	1,49E-02	8,57E-05	-2,02E-03***	1,72E-05	0,00E+00	5,29E-06	1,96E-05	0,00E+00	-2,91E-04	1,30E-02

***The negative value is given by the contribution of emissions to water present within the dataset relating to the treatment and purification of waste water.

PRODUCTION OF WASTE	U.M.	PRODUCTION PHASE			INSTALLATION PHASE	END OF LIFE				MODULE D	TOTAL
		A1	A2	A3	A5	C1	C2	C3	C4	D	
HWD	kg	2,19E-05	1,94E-06	3,40E-03	5,45E-08	0,00E+00	1,32E-07	2,03E-07	0,00E+00	-1,98E-07	3,43E-03
NHWD	kg	1,33E-01	2,84E-02	3,56E-02	1,38E-03	0,00E+00	2,40E-03	1,42E-03	0,00E+00	-1,51E-03	2,02E-01
RWD	kg	5,12E-05	4,86E-06	8,25E-06	1,62E-07	0,00E+00	3,43E-07	5,39E-07	0,00E+00	-4,89E-07	6,53E-05

THE ADDITIONAL ENVIRONMENTAL INDICATORS HAVE BEEN CALCULATED, EVEN IF NOT LISTED IN THE EPD, AND ARE INSTEAD PRESENT IN THE LCA REPORT.

PORTOBUFFOLE' PLANT (UP1)

WHITE SHOWER TRAYS Results for 1 kilogram (kg) of product

IMPACT CATEGORIES	U.M.	PRODUCTION PHASE			INSTALLATION PHASE	END OF LIFE				MODULE D	TOTAL
		A1	A2	A3	A5	C1	C2	C3	C4	D	
GWP-total	kg CO ₂ eq	1,30E+00	5,02E-02	4,15E-01	6,33E-03	0,00E+00	3,34E-03	4,00E-03	0,00E+00	-6,72E-03	1,77E+00
GWP-fossil	kg CO ₂ eq	1,28E+00	5,01E-02	5,87E-01	6,33E-03	0,00E+00	3,33E-03	4,00E-03	0,00E+00	-6,62E-03	1,94E+00
GWP-biogenic	kg CO ₂ eq	1,06E-02	2,48E-05	-1,73E-01	0,00E+00	0,00E+00	1,78E-06	1,11E-06	0,00E+00	-8,60E-05	-1,63E-01
GWP-luluc	kg CO ₂ eq	4,57E-04	2,16E-05	1,20E-03	4,98E-06	0,00E+00	1,17E-06	3,15E-07	0,00E+00	-8,76E-06	1,69E-03
ODP	kg CFC11 eq	1,66E-07	1,11E-08	4,53E-08	4,80E-10	0,00E+00	7,57E-10	8,64E-10	0,00E+00	-6,00E-10	2,24E-07
AP	mol H+ eq	6,06E-03	2,01E-04	1,44E-03	2,21E-05	0,00E+00	1,36E-05	4,19E-05	0,00E+00	-4,31E-05	7,79E-03
EP-freshwater	kg P eq	3,14E-04	4,27E-06	1,03E-04	1,40E-06	0,00E+00	2,44E-07	1,44E-07	0,00E+00	-4,06E-06	4,24E-04
EP-marine	kg N eq	9,62E-04	5,82E-05	5,36E-04	7,25E-06	0,00E+00	4,09E-06	1,85E-05	0,00E+00	-9,77E-06	1,59E-03
EP-terrestrial	mol N eq	1,03E-02	6,36E-04	4,12E-03	6,29E-05	0,00E+00	4,47E-05	2,03E-04	0,00E+00	-1,18E-04	1,54E-02
POCP	kg NMVOC eq	6,03E-03	1,95E-04	1,15E-03	1,93E-05	0,00E+00	1,37E-05	5,57E-05	0,00E+00	-2,99E-05	7,47E-03
ADP-minerals & metals**	kg Sb eq	1,17E-05	1,80E-06	3,24E-06	7,84E-08	0,00E+00	9,02E-08	6,14E-09	0,00E+00	-7,07E-07	1,69E-05
ADP-fossil**	MJ	3,03E+01	7,45E-01	4,17E+00	6,83E-02	0,00E+00	5,03E-02	5,51E-02	0,00E+00	-9,64E-02	3,54E+01
WDP	m ³ depriv.	4,54E-01	2,29E-03	-9,61E-02***	9,98E-04	0,00E+00	1,40E-04	7,38E-05	0,00E+00	-1,13E-02	3,62E-01

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*** The negative value is given by the contribution of emissions to water present within the dataset relating to the treatment and purification of waste water.

CONSUMPTION OF RESOURCES AND OUTPUT	U.M.	PRODUCTION PHASE			INSTALLATION PHASE	END OF LIFE				MODULE D	TOTAL
		A1	A2	A3	A5	C1	C2	C3	C4	D	
PERE	MJ	4,39E-01	1,27E-02	-1,52E+00	4,36E-03	0,00E+00	7,09E-04	3,75E-03	0,00E+00	-8,63E-03	-1,06E+00
PERM	MJ	0,00E+00	0,00E+00	4,99E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,99E+00
PERT	MJ	4,39E-01	1,27E-02	3,47E+00	4,36E-03	0,00E+00	7,09E-04	3,75E-03	0,00E+00	-8,63E-03	3,93E+00
PENRE	MJ	9,49E+00	7,45E-01	3,97E+00	6,83E-02	0,00E+00	5,03E-02	1,09E-01	0,00E+00	-9,64E-02	1,44E+01
PENRM	MJ	8,16E+00	0,00E+00	1,96E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,36E+00
PENRT	MJ	1,76E+01	7,45E-01	4,17E+00	6,83E-02	0,00E+00	5,03E-02	1,09E-01	0,00E+00	-9,64E-02	2,28E+01
SM	kg	5,20E-03	1,70E-04	3,01E-01	9,64E-02	0,00E+00	9,90E-06	0,00E+00	0,00E+00	-1,10E-04	4,02E-01
CRU	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
MFR	kg	0,00E+00	0,00E+00	2,67E-01	9,90E-02	0,00E+00	0,00E+00	7,90E-02	0,00E+00	0,00E+00	4,45E-01
MER	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
EEE	MJ	0,00E+00	0,00E+00	2,33E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,33E-01
EET	MJ	0,00E+00	0,00E+00	3,20E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,20E-02
FW	m ³	1,22E-02	8,87E-05	-1,49E-03***	3,26E-05	0,00E+00	5,29E-06	2,82E-05	0,00E+00	-2,91E-04	1,09E-02

*** The negative value is given by the contribution of emissions to water present within the dataset relating to the treatment and purification of waste water.

PRODUCTION OF WASTE	U.M.	PRODUCTION PHASE			INSTALLATION PHASE	END OF LIFE				MODULE D	TOTAL
		A1	A2	A3	A5	C1	C2	C3	C4	D	
HWD	kg	1,96E-05	2,00E-06	3,41E-03	9,75E-08	0,00E+00	1,32E-07	2,26E-07	0,00E+00	-1,98E-07	3,43E-03
NHWD	kg	1,00E-01	2,94E-02	5,35E-02	2,71E-03	0,00E+00	2,40E-03	2,17E-03	0,00E+00	-1,51E-03	1,90E-01
RWD	kg	4,52E-05	5,03E-06	1,20E-05	2,76E-07	0,00E+00	3,43E-07	5,99E-07	0,00E+00	-4,89E-07	6,34E-05

THE ADDITIONAL ENVIRONMENTAL INDICATORS HAVE BEEN CALCULATED, EVEN IF NOT LISTED IN THE EPD, AND ARE INSTEAD PRESENT IN THE LCA REPORT.

PRATA di PORDENONE PLANT (UP2)

BATHTUB B16 Results for 1 kilogram (kg) of product

IMPACT CATEGORIES	U.M.	PRODUCTION PHASE			INSTALLATION PHASE	END OF LIFE				MODULE D	TOTAL
		A1	A2	A3	A5	C1	C2	C3	C4	D	
GWP-total	kg CO ₂ eq	2,99E+00	1,93E-01	8,86E-01	2,75E-03	0,00E+00	3,34E-03	4,00E-03	0,00E+00	-6,72E-03	4,08E+00
GWP-fossil	kg CO ₂ eq	2,96E+00	1,93E-01	1,22E+00	2,75E-03	0,00E+00	3,33E-03	4,00E-03	0,00E+00	-6,62E-03	4,38E+00
GWP-biogenic	kg CO ₂ eq	-1,45E-02	9,52E-05	-3,30E-01	0,00E+00	0,00E+00	1,78E-06	1,11E-06	0,00E+00	-8,60E-05	-3,45E-01
GWP-luluc	kg CO ₂ eq	4,54E-02	8,29E-05	1,00E-10	1,25E-12	0,00E+00	1,17E-06	3,15E-07	0,00E+00	-8,76E-06	4,55E-02
ODP	kg CFC11 eq	4,76E-07	4,25E-08	1,78E-08	2,38E-10	0,00E+00	7,57E-10	8,64E-10	0,00E+00	-6,00E-10	5,38E-07
AP	mol H ₂ eq	1,39E-02	7,73E-04	1,25E-03	1,34E-05	0,00E+00	1,36E-05	4,19E-05	0,00E+00	-4,31E-05	1,60E-02
EP-freshwater	kg P eq	8,19E-04	1,64E-05	7,79E-05	9,51E-07	0,00E+00	2,44E-07	1,44E-07	0,00E+00	-4,06E-06	9,14E-04
EP-marine	kg N eq	2,58E-03	2,24E-04	5,98E-04	3,77E-06	0,00E+00	4,09E-06	1,85E-05	0,00E+00	-9,77E-06	3,43E-03
EP-terrestrial	mol N eq	2,57E-02	2,45E-03	3,42E-03	3,76E-05	0,00E+00	4,47E-05	2,03E-04	0,00E+00	-1,18E-04	3,18E-02
POCP	kg NMVOC eq	1,77E-02	7,51E-04	1,09E-03	1,07E-05	0,00E+00	1,37E-05	5,57E-05	0,00E+00	-2,99E-05	1,96E-02
ADP-minerals & metals**	kg Sb eq	3,21E-05	6,91E-06	3,50E-06	3,35E-08	0,00E+00	9,02E-08	6,14E-09	0,00E+00	-7,07E-07	4,26E-05
ADP-fossil**	MJ	6,43E+01	2,87E+00	2,72E+00	3,49E-02	0,00E+00	5,03E-02	5,51E-02	0,00E+00	-9,64E-02	7,00E+01
WDP	m ³ depriv.	1,08E+00	8,79E-03	-4,18E-01***	2,53E-04	0,00E+00	1,40E-04	7,38E-05	0,00E+00	-1,13E-02	6,69E-01

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*** The negative value is given by the contribution of emissions to water present within the dataset relating to the treatment and purification of waste water.

CONSUMPTION OF RESOURCES AND OUTPUT	U.M.	PRODUCTION PHASE			INSTALLATION PHASE	END OF LIFE				MODULE D	TOTAL
		A1	A2	A3	A5	C1	C2	C3	C4	D	
PERE	MJ	1,08E+00	4,87E-02	1,81E+00	2,87E-03	0,00E+00	7,09E-04	2,98E-04	0,00E+00	-8,63E-03	2,95E+00
PERM	MJ	0,00E+00	0,00E+00	2,28E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,28E+00
PERT	MJ	1,08E+00	4,87E-02	4,10E+00	2,87E-03	0,00E+00	7,09E-04	2,98E-04	0,00E+00	-8,63E-03	5,23E+00
PENRE	MJ	2,75E+01	2,87E+00	2,62E+00	3,49E-02	0,00E+00	5,03E-02	5,51E-02	0,00E+00	-9,64E-02	3,31E+01
PENRM	MJ	1,31E+01	0,00E+00	9,53E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,32E+01
PENRT	MJ	4,06E+01	2,87E+00	2,72E+00	3,49E-02	0,00E+00	5,03E-02	5,51E-02	0,00E+00	-9,64E-02	4,64E+01
SM	kg	1,19E-02	6,54E-04	1,23E-01	1,02E-01	0,00E+00	9,90E-06	0,00E+00	0,00E+00	-1,10E-04	2,38E-01
CRU	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
MFR	kg	0,00E+00	0,00E+00	2,79E-01	1,36E-01	0,00E+00	0,00E+00	1,35E-01	0,00E+00	0,00E+00	5,50E-01
MER	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
EEE	MJ	0,00E+00	0,00E+00	4,88E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,88E-01
EET	MJ	0,00E+00	0,00E+00	7,78E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,78E-02
FW	m ³	4,98E-02	3,41E-04	-9,33E-03***	1,29E-05	0,00E+00	5,29E-06	2,83E-06	0,00E+00	-2,91E-04	4,08E-02

*** The negative value is given by the contribution of emissions to water present within the dataset relating to the treatment and purification of waste water.

PRODUCTION OF WASTE	U.M.	PRODUCTION PHASE			INSTALLATION PHASE	END OF LIFE				MODULE D	TOTAL
		A1	A2	A3	A5	C1	C2	C3	C4	D	
HWD	kg	5,72E-05	7,70E-06	7,44E-06	4,39E-08	0,00E+00	1,32E-07	1,50E-07	0,00E+00	-1,98E-07	7,27E-05
NHWD	kg	5,06E-01	1,13E-01	4,39E-02	9,00E-04	0,00E+00	2,40E-03	6,52E-05	0,00E+00	-1,51E-03	6,66E-01
RWD	kg	9,77E-05	1,93E-05	7,82E-06	1,55E-07	0,00E+00	3,43E-07	3,82E-07	0,00E+00	-4,89E-07	1,26E-04

THE ADDITIONAL ENVIRONMENTAL INDICATORS HAVE BEEN CALCULATED, EVEN IF NOT LISTED IN THE EPD, AND ARE INSTEAD PRESENT IN THE LCA REPORT.

PRATA di PORDENONE PLANT (UP2)

BATHTUB F16 Results for 1 kilogram (kg) of product

IMPACT CATEGORIES	U.M.	PRODUCTION PHASE			INSTALLATION PHASE	END OF LIFE				MODULE D	TOTAL
		A1	A2	A3	A5	C1	C2	C3	C4	D	
GWP-total	kg CO ₂ eq	2,67E+00	1,13E-01	8,35E-01	3,43E-03	0,00E+00	3,34E-03	4,00E-03	0,00E+00	-6,72E-03	3,63E+00
GWP-fossil	kg CO ₂ eq	2,64E+00	1,13E-01	1,23E+00	3,43E-03	0,00E+00	3,33E-03	4,00E-03	0,00E+00	-6,62E-03	3,99E+00
GWP-biogenic	kg CO ₂ eq	-2,96E-03	5,60E-05	-3,94E-01	0,00E+00	0,00E+00	1,78E-06	1,11E-06	0,00E+00	-8,60E-05	-3,97E-01
GWP-luluc	kg CO ₂ eq	3,29E-02	4,88E-05	6,28E-04	3,99E-06	0,00E+00	1,17E-06	3,15E-07	0,00E+00	-8,76E-06	3,36E-02
ODP	kg CFC11 eq	7,54E-06	2,50E-08	1,92E-08	2,96E-10	0,00E+00	7,57E-10	8,64E-10	0,00E+00	-6,00E-10	7,59E-06
AP	mol H ₂ eq	1,23E-02	4,54E-04	1,34E-03	1,67E-05	0,00E+00	1,36E-05	4,19E-05	0,00E+00	-4,31E-05	1,42E-02
EP-freshwater	kg P eq	7,21E-04	9,67E-06	8,46E-05	1,19E-06	0,00E+00	2,44E-07	1,44E-07	0,00E+00	-4,06E-06	8,17E-04
EP-marine	kg N eq	2,31E-03	1,32E-04	6,20E-04	4,69E-06	0,00E+00	4,09E-06	1,85E-05	0,00E+00	-9,77E-06	3,09E-03
EP-terrestrial	mol N eq	2,32E-02	1,44E-03	3,65E-03	4,68E-05	0,00E+00	4,47E-05	2,03E-04	0,00E+00	-1,18E-04	2,86E-02
POCP	kg NMVOC eq	1,42E-02	4,42E-04	1,16E-03	1,33E-05	0,00E+00	1,37E-05	5,57E-05	0,00E+00	-2,99E-05	1,59E-02
ADP-minerals & metals**	kg Sb eq	2,92E-05	4,06E-06	3,74E-06	4,16E-08	0,00E+00	9,02E-08	6,14E-09	0,00E+00	-7,07E-07	3,71E-05
ADP-fossil**	MJ	5,58E+01	1,69E+00	2,92E+00	4,35E-02	0,00E+00	5,03E-02	5,51E-02	0,00E+00	-9,64E-02	6,06E+01
WDP	m ³ depriv.	8,96E-01	5,17E-03	-3,99E-01***	3,14E-04	0,00E+00	1,40E-04	7,38E-05	0,00E+00	-1,13E-02	5,02E-01

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*** The negative value is given by the contribution of emissions to water present within the dataset relating to the treatment and purification of waste water.

CONSUMPTION OF RESOURCES AND OUTPUT	U.M.	PRODUCTION PHASE			INSTALLATION PHASE	END OF LIFE				MODULE D	TOTAL
		A1	A2	A3	A5	C1	C2	C3	C4	D	
PERE	MJ	1,23E+00	2,87E-02	2,24E+00	3,53E-03	0,00E+00	7,09E-04	3,83E-03	0,00E+00	-8,63E-03	3,51E+00
PERM	MJ	0,00E+00	0,00E+00	2,84E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,84E+00
PERT	MJ	1,23E+00	2,87E-02	5,07E+00	3,53E-03	0,00E+00	7,09E-04	3,83E-03	0,00E+00	-8,63E-03	6,34E+00
PENRE	MJ	2,93E+01	1,69E+00	2,80E+00	4,28E-02	0,00E+00	5,03E-02	9,79E-02	0,00E+00	-9,64E-02	3,40E+01
PENRM	MJ	9,46E+00	0,00E+00	1,18E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,58E+00
PENRT	MJ	3,88E+01	1,69E+00	2,92E+00	4,28E-02	0,00E+00	5,03E-02	9,79E-02	0,00E+00	-9,64E-02	4,36E+01
SM	kg	1,08E-02	3,85E-04	1,24E-01	1,26E-01	0,00E+00	9,90E-06	0,00E+00	0,00E+00	-1,10E-04	2,61E-01
CRU	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
MFR	kg	0,00E+00	0,00E+00	2,79E-01	1,69E-01	0,00E+00	0,00E+00	1,67E-01	0,00E+00	0,00E+00	6,16E-01
MER	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
EEE	MJ	0,00E+00	0,00E+00	4,88E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,88E-01
EET	MJ	0,00E+00	0,00E+00	7,78E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,78E-02
FW	m ³	3,95E-02	2,01E-04	-8,84E-03***	1,58E-05	0,00E+00	5,29E-06	1,87E-05	0,00E+00	-2,91E-04	3,09E-02

*** The negative value is given by the contribution of emissions to water present within the dataset relating to the treatment and purification of waste water.

PRODUCTION OF WASTE	U.M.	PRODUCTION PHASE			INSTALLATION PHASE	END OF LIFE				MODULE D	TOTAL
		A1	A2	A3	A5	C1	C2	C3	C4	D	
HWD	kg	5,24E-05	4,53E-06	7,81E-06	5,38E-08	0,00E+00	1,32E-07	2,04E-07	0,00E+00	-1,98E-07	6,52E-05
NHWD	kg	5,69E-01	6,64E-02	4,61E-02	1,10E-03	0,00E+00	2,40E-03	1,17E-03	0,00E+00	-1,51E-03	6,86E-01
RWD	kg	8,44E-05	1,14E-05	8,81E-06	1,91E-07	0,00E+00	3,43E-07	5,73E-07	0,00E+00	-4,89E-07	1,06E-04

THE ADDITIONAL ENVIRONMENTAL INDICATORS HAVE BEEN CALCULATED, EVEN IF NOT LISTED IN THE EPD, AND ARE INSTEAD PRESENT IN THE LCA REPORT.

PRATA di PORDENONE PLANT (UP2)

BATHTUB S16 Results for 1 kilogram (kg) of product

IMPACT CATEGORIES	U.M.	PRODUCTION PHASE			INSTALLATION PHASE	END OF LIFE				MODULE D	TOTAL
		A1	A2	A3	A5	C1	C2	C3	C4	D	
GWP-total	kg CO ₂ eq	2,75E+00	1,17E-01	8,35E-01	3,43E-03	0,00E+00	3,34E-03	4,00E-03	0,00E+00	-6,72E-03	3,71E+00
GWP-fossil	kg CO ₂ eq	2,71E+00	1,17E-01	1,23E+00	3,43E-03	0,00E+00	3,33E-03	4,00E-03	0,00E+00	-6,62E-03	4,07E+00
GWP-biogenic	kg CO ₂ eq	-3,64E-03	5,79E-05	-3,94E-01	0,00E+00	0,00E+00	1,78E-06	1,11E-06	0,00E+00	-8,60E-05	-3,98E-01
GWP-luluc	kg CO ₂ eq	3,40E-02	5,04E-05	6,28E-04	3,99E-06	0,00E+00	1,17E-06	3,15E-07	0,00E+00	-8,76E-06	3,47E-02
ODP	kg CFC11 eq	7,78E-06	2,58E-08	1,92E-08	2,96E-10	0,00E+00	7,57E-10	8,64E-10	0,00E+00	-6,00E-10	7,83E-06
AP	mol H ₂ eq	1,27E-02	4,70E-04	1,34E-03	1,67E-05	0,00E+00	1,36E-05	4,19E-05	0,00E+00	-4,31E-05	1,46E-02
EP-freshwater	kg P eq	7,42E-04	9,99E-06	8,46E-05	1,19E-06	0,00E+00	2,44E-07	1,44E-07	0,00E+00	-4,06E-06	8,38E-04
EP-marine	kg N eq	2,38E-03	1,36E-04	6,20E-04	4,69E-06	0,00E+00	4,09E-06	1,85E-05	0,00E+00	-9,77E-06	3,16E-03
EP-terrestrial	mol N eq	2,38E-02	1,49E-03	3,65E-03	4,68E-05	0,00E+00	4,47E-05	2,03E-04	0,00E+00	-1,18E-04	2,93E-02
POCP	kg NMVOC eq	1,46E-02	4,57E-04	1,16E-03	1,33E-05	0,00E+00	1,37E-05	5,57E-05	0,00E+00	-2,99E-05	1,63E-02
ADP-minerals & metals**	kg Sb eq	3,00E-05	4,20E-06	3,74E-06	4,16E-08	0,00E+00	9,02E-08	6,14E-09	0,00E+00	-7,07E-07	3,81E-05
ADP-fossil**	MJ	5,72E+01	1,74E+00	2,92E+00	4,35E-02	0,00E+00	5,03E-02	5,51E-02	0,00E+00	-9,64E-02	6,20E+01
WDP	m ³ depriv.	9,27E-01	5,34E-03	-3,99E-01***	3,14E-04	0,00E+00	1,40E-04	7,38E-05	0,00E+00	-1,13E-02	5,34E-01

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

*** The negative value is given by the contribution of emissions to water present within the dataset relating to the treatment and purification of waste water.

CONSUMPTION OF RESOURCES AND OUTPUT	U.M.	PRODUCTION PHASE			INSTALLATION PHASE	END OF LIFE				MODULE D	TOTAL
		A1	A2	A3	A5	C1	C2	C3	C4	D	
PERE	MJ	1,25E+00	2,96E-02	2,24E+00	3,58E-03	0,00E+00	7,09E-04	3,83E-03	0,00E+00	-8,63E-03	3,52E+00
PERM	MJ	0,00E+00	0,00E+00	2,84E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,84E+00
PERT	MJ	1,25E+00	2,96E-02	5,07E+00	3,58E-03	0,00E+00	7,09E-04	3,83E-03	0,00E+00	-8,63E-03	6,35E+00
PENRE	MJ	2,97E+01	1,74E+00	2,80E+00	4,35E-02	0,00E+00	5,03E-02	9,79E-02	0,00E+00	-9,64E-02	3,44E+01
PENRM	MJ	9,80E+00	0,00E+00	1,18E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,92E+00
PENRT	MJ	3,95E+01	1,74E+00	2,92E+00	4,35E-02	0,00E+00	5,03E-02	9,79E-02	0,00E+00	-9,64E-02	4,43E+01
SM	kg	1,10E-02	3,98E-04	1,24E-01	1,28E-01	0,00E+00	9,90E-06	0,00E+00	0,00E+00	-1,10E-04	2,63E-01
CRU	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
MFR	kg	0,00E+00	0,00E+00	2,79E-01	1,69E-01	0,00E+00	0,00E+00	1,69E-02	0,00E+00	0,00E+00	4,65E-01
MER	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
EEE	MJ	0,00E+00	0,00E+00	4,88E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,88E-01
EET	MJ	0,00E+00	0,00E+00	7,78E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,78E-02
FW	m ³	4,06E-02	2,07E-04	-8,84E-03***	1,61E-05	0,00E+00	5,29E-06	1,87E-05	0,00E+00	-2,91E-04	3,20E-02

*** The negative value is given by the contribution of emissions to water present within the dataset relating to the treatment and purification of waste water.

PRODUCTION OF WASTE	U.M.	PRODUCTION PHASE			INSTALLATION PHASE	END OF LIFE				MODULE D	TOTAL
		A1	A2	A3	A5	C1	C2	C3	C4	D	
HWD	kg	5,33E-05	4,68E-06	7,81E-06	5,46E-08	0,00E+00	1,32E-07	2,04E-07	0,00E+00	-1,98E-07	6,62E-05
NHWD	kg	5,88E-01	6,87E-02	4,61E-02	1,12E-03	0,00E+00	2,40E-03	1,17E-03	0,00E+00	-1,51E-03	7,08E-01
RWD	kg	8,64E-05	1,18E-05	8,81E-06	1,93E-07	0,00E+00	3,43E-07	5,73E-07	0,00E+00	-4,89E-07	1,08E-04

THE ADDITIONAL ENVIRONMENTAL INDICATORS HAVE BEEN CALCULATED, EVEN IF NOT LISTED IN THE EPD, AND ARE INSTEAD PRESENT IN THE LCA REPORT.

Glossary

- Total GWP** = Total global warming potential;
- GWP-fossil** = Global warming potential, fossil fuels
- GWP-biogenic** = Global warming potential, biogenic;
- GWP-luluc** = Global warming potential, use of the soil and change in the use of the soil;
- ODP** = Stratospheric ozone depletion potential;
- AP** = Acidification potential, cumulative exceedance;
- EP-freshwater** = Eutrophication potential, fraction of nutrients reaching the final freshwater compartment;
- EP-seawater** = Eutrophication potential, fraction of nutrients reaching the final compartment of seawater;
- Terrestrial-EP** = Eutrophication Potential, Cumulative Exceedance;
- POCP** = Tropospheric ozone formation potential;
- ADP-minerals and metals** = Abiotic depletion potential for non-fossil resources;
- ADP-fossil** = Abiotic depletion potential for fossil resources;
- WDP** = Water deprivation potential (user), deprivation weighted water consumption;
-
- PERE** = Use of renewable primary energy excluding renewable primary energy resources used as raw materials;
- PERM** = Use of renewable primary energy resources as raw materials;
- PERT** = Total use of renewable primary energy resources;
- PENRE** = Use of non-renewable primary energy resources excluding non-renewable primary energy resources used as raw materials;
- PENRM** = Use of non-renewable primary energy resources as raw materials;
- PENRT** = Total use of non-renewable primary energy resources;
- SM** = Use of secondary materials;
- CRU** = Components for reuse;
- RSF** = Use of renewable secondary fuels;
- NRSF** = Use of non-renewable secondary fuels;
- MFR** = Materials for recycling;
- MER** = Materials for energy recovery;
- EEE** = Electric power exported;
- EET** = Thermal energy exported;
- FW** = Fresh water use;
-
- HWD** = Hazardous waste disposed of;
- NHWD** = Non-hazardous waste disposed of;
- RWD** = Radioactive waste disposed of.

Information On The Biogenic Carbon Content

According to EN 15804:2012+A2 2019 if the mass of materials containing biogenic carbon is less than 5% of the mass of the product, the biogenic carbon content declaration can be omitted. In the present study the biogenic carbon content of the finished product is higher than 5% of the mass of the product itself, therefore it is listed in the following Table.

PRODUCTS	TOTAL kgC/UD
WHITE WASHBASINS	-
WHITE SHOWER TRAYS	-
BATHTUB B16	3.95E-03
BATHTUB F16	8.07E-04
BATHTUB S16	9.92E-04

According to EN 15804:2012+A2 2019 if the mass of packaging containing biogenic carbon is less than 5% of the mass of the packaging, the biogenic carbon content declaration can be omitted. In the present study the biogenic carbon content of the packaging is higher than 5% of the mass of the product itself, therefore it must be declared. As already highlighted in the previous point, the following impact relating to kgC-biogenic is recorded for the packaging of the selected products:

PACKAGING PRODUCED	TOTAL kgC/UD
WASHBASIN PACKAGING	4.73E-02
WHITE SHOWER TRAY PACKAGING	4.78E-02
BATHTUB B16 PACKAGING	7.21E-02
BATHTUB F16 PACKAGING	8.96E-02
BATHTUB S16 PACKAGING	8.96E-02

The contribution is mainly attributable to the CO₂ stored in the wood used in the pallets and in the cardboard for the packaging and transport of the finished products.

FURTHER INFORMATION ON THE RELEASE OF HAZARDOUS SUBSTANCES INTO THE INDOOR AIR

The indoor products covered by the EPD comply with the requirements relating to emissions.

Interpretation of the results of the LCA study

The study shows that the impact of the highest total GWP is due to the raw material procurement phase (module A1) (85.8% washbasin - 80% shower tray in UP1) (B16 bathtub 76.8%, F16 bathtub 78.6% and S16 bathtub 79% in UP2). In particular, this impact is caused by the use of resin 2140068 for the washbasin (50.4%), resin 2140068 for the shower tray (65.9%), resin 2140055 for the B16 bathtub (74%), resin 2140075 for the F16 and for the S16 bathtubs (62%).

After module A1, the impact of the highest total GWP is due to phase A3) Production, which accounts for 17.4% for white washbasins, 25.6% for shower trays, 22.8% for the B16, 24.6% for the F16 and 24% for the S16 bathtubs.

Module A1 also considers the generation of electricity modelled through the electrical "Residual mix" from the AIB publication (2021) and the process of generating electricity from photovoltaics from Ecoinvent 3.8 for self-consumption. Subsequently, module A2 was also analysed, in which the transport of suppliers to the company sites of Nicos International and module A3 linked to the production of products are considered.

For the products analysed, in module A2 the greatest impact is caused by the transport for the procurement of raw materials (about 80.5% (washbasins) - 77.7% (shower trays) - 98.4% (B16 bathtub), 97.6% and 96.8% (F16 and S16 bathtubs) of the total), while in module A3 the greatest impact for the "Climate change-Fossil" category is caused by the packaging of the finished product (for shower trays 29.1% for UP1). While by emissions into the atmosphere (from chimneys) and by natural gas for washbasins respectively 31.5% and 29.2% for UP1; for UP2 respectively 37.9% for the B16 bathtub, 37.5% for the F16 and S16 bathtubs.

References

- 1.** Regulation of the EPD Italy Program rev. 5.2 of 02/16/2022.
- 2.** PCR for construction products: ICMQ-001/15 rev 3 (compliant with EN 15804+A2).
- 3.** ISO 14020:2000 Environmental labels and declarations – General principles.
- 4.** ISO 14025:2010 Environmental labels and declarations – Type III environmental declarations – Principles and procedures.
- 5.** ISO 14040:2006 Environmental management – Life cycle assessment – Principles and framework.
- 6.** ISO 14044:2006 Environmental management – Life cycle assessment – Requirements and guidelines.
- 7.** EN 15804:2012+A2:2019: Sustainability of construction works – Environmental Product Declarations – Core rules for the product category of construction products.
- 8.** LCA Report - LCA (LIFE CYCLE ASSESSMENT) STUDY FOR THE CALCULATION OF THE ENVIRONMENTAL IMPACTS OF NICOS INTERNATIONAL S.p.A. WASHBASINS, SHOWER TRAYS AND BATHTUBS – Rev. 01 of 29/12/2022.