

ENVIRONMENTAL PRODUCT DECLARATION

Indoor decorative paints

DAW Italia GmbH & Co KG

InnenColor

CapaGips

CapaTop

Capaweiss

CapaWeiss-W

CapaMatt

CapaTex Matt 5

CapaTex Satin

20 DeckWeiss-W

DAW

DEUTSCHE
AMPHIBOLIN-WERKE
VON ROBERT MURJAHN



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THE INTERNATIONAL EPD® SYSTEM



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1. Introduction

DAW Italia is working on quantifying the environmental impact of its products to improve their technical and environmental performance. For these reasons, the company has considered it essential to study and evaluate its products most in demand on the market, in order to communicate their environmental performance to its customers.

The company

The Italian headquarters of the DAW group, born in Germany in 1895, is one of the leading manufacturers of paints, varnishes and technological solutions for the building industry in Europe. It was established in 1969 in Rome and moved to its current headquarters in Milan in 2001.

DAW Italy is a multi-brand reality, with the aim of responding to the needs of different types of customers with three highly specialized brands, united by the common mission of developing and offering products and services characterized by qualitative excellence and constant innovation. DAW's mission has always been to bring technological innovation to the professional construction sector through the development of products and solutions that always guarantee the highest quality standard and contribute to energy saving, improvement of living comfort and environmental protection. The DAW Group, through all its divisions, pursues a sustainability strategy based on three pillars:

1. Company. Sustainable management of all business activities and processes, from research and development to the purchase of raw materials, from workplace safety to energy consumption.
2. Products. Development of innovative and high quality products, compatible with the environment, capable of improving living comfort, always with the attention to the health and well-being of consumers.
3. Construction. Support and commitment in spreading the culture of sustainable construction, from the design phase to the construction phase, with particular attention to energy saving, pollution reduction and maintenance of the value of buildings over time.

DAW Italia is certified with ISO 9001 in the field of quality and ISO 14001 in the field of environmental protection.



Figure 1: DAW Italia.

The products

This study concerns a group of 9 Caparol interior paint products that can be grouped into four different sub-categories:

- 1) Products intended for high performance finishes (CapaGips, CapaMatt and CapaTop);
- 2) Products intended for classic finishes (InnenColor and Capaweiss);
- 3) Anti-mold systems (Capaweiss-W and Deckweiss-W);
- 4) Wall enamels (CapaTex matt 5 and CapaTex Satin 20).

InnenColor



Water-repellent, scrub resistant, water vapor permeable paint, free of solvents and plasticizers, suitable for new or already painted interior surfaces. Hiding power Class 2 and wet abrasion Class 3 according to EN 13300.

CapaGips



Interior paint especially suitable for plasterboards, direct application on highly absorbent substrates due to the excellent adhesion on any type of new or already painted mineral substrate. Hiding power Class 1 and wet abrasion Class 3 according to EN 13300.

Capaweiss



Diffusion capable free of solvents and plasticizers interior paint with high degree of white, suitable for protection and decoration of interior surfaces, new or already painted. Hiding power Class 2 and wet abrasion Class 3 according to EN 13300.

Capaweiss-w



Film-preserved diffusion capable free of solvents and plasticizers interior paint with high degree of white, suitable for protection and decoration of interior surfaces, new or already painted. Hiding power Class 2 and wet abrasion Class 3 according to EN 13300.

CapaTop



Interior fine paint, highly scrub resistant, high hiding power, suitable for decoration of smooth surfaces: gypsum-based and lime-cement plasters, plasterboard panels and smooth renders. Hiding power and wet abrasion Class 1 according to EN 13300.

CapaMatt



Interior free of solvents and plasticizers paint, dull matt, scrub resistant with high yield for protection and decoration of all interior surfaces. Hiding power Class 1 and wet abrasion Class 2 according to EN 13300.

Deckweiss W



Interior free of solvents and plasticizers paint, with Silver Ions Technology, suitable for all the common interior surfaces that require coatings with film protection by mould growth and for supporting the hygiene. Class 1 and wet abrasion Class 3 according to EN 13300.

CapaTex Matt 5



High quality interior latex paint for dull-matt surfaces, suitable for the coating and renovation of all surfaces subject to frequent washing. Hiding power and wet abrasion Class 1 according to EN 13300.

CapaTex Satin 20



High quality interior latex paint with Silver Ions Technology for satin surfaces, suitable for the coating and renovation of all surfaces subject to frequent washing. Hiding power Class 2 and wet abrasion Class 1 according to EN 13300.

Production process

Innencolor, CapaGips, Capaweiss, Capaweiss-w, CapaMatt, CapaTex Matt 5, CapaTop, CapaTex Satin 20, Deckweiss W are formulated in the Vermezzo plant con Zelo by DAW Italy. The production cycle of the products under study can be summarized by the following flow chart:



Figure 2: Flow chart of the production cycle.

During the use phase of the products, water is added to the products to make them ready for use. The composition for each of the products analyzed and the relative packaging are shown below.

		Innencolor	CapaGips	Capaweiss	Capaweiss-w	CapaMatt
Bulk product	Resin/dispersions	11.7%	14.3%	7.5%	7.5%	16.5%
	Water	26.2%	29.6%	26.3%	25.4%	27.6%
	Pigment and fillers	49.6%	46.2%	58.2%	58.3%	41.4%
	Additives	3.0%	2.1%	2.1%	2.7%	3.7%
Packaging	PP tank	4.5%	3.7%	3.1%	3.1%	4.5%
	Steel handle	0.3%	0.3%	0.2%	0.2%	0.2%
	Carton box	1.0%	-	-	-	1.6%
	PE film	0.1%	0.05%	0.04%	0.04%	0.1%
	Wood pallet	3.7%	3.7%	2.6%	2.6%	4.5%
Total		100%	100%	100%	100%	100%
		CapaTex Matt 5	CapaTop	CapaTex Satin 20	Deckweiss W	
Bulk product	Resin/dispersions	27.1%	26.6%	41.2%	15.4%	
	Water	13.5%	13.3%	13.5%	19.0%	
	Pigment and fillers	46.0%	45.3%	32.7%	53.7%	
	Additives	4.0%	3.9%	2.6%	2.7%	
Packaging	PP tank	4.3%	4.9%	4.5%	3.0%	
	Steel handle	0.4%	0.1%	0.5%	0.4%	
	Carton box	0.9%	1.7%	0.7%	3.0%	
	PE film	0.1%	0.1%	0.1%	0.05%	
	Wood pallet	3.8%	4.0%	4.2%	2.8%	
Total		100%	100%	100%	100%	

Table 1: Composition of products and packaging.

Table 2 shows the technical information of each product analyzed.

Product	Coverage (m ² /kg)	Density (kg/L)	VOC (g/L)
Innencolor	12.4	1.55	0.6
CapaGips	11.2	1.40	5.6
Capaweiss	13.28	1.66	0.3
Capaweiss-w	11.62	1.66	0.3
CapaMatt	11.44	1.43	0.3
CapaTex Matt 5	13.95	1.55	15.9
CapaTop	13.95	1.55	15.9
CapaTex Satin 20	8.26	1.36	0.7
Deckweiss W	16.3	1.63	0.5

Table 2: Technical information of products analyzed.

In addition, the indication of the hazardous substances pursuant to Reg. 1272/2008 (CLP) present within the categories of raw materials used, as required by the reference PCR 2012:01 v2.33, is shown below. To calculate the maximum quantity found in the product, the concentration value from SDS was taken and multiplied by the highest concentration of the raw material category among the various products. The remaining raw materials used do not contain dangerous substances and have not been reported.

Components	Substances	% from SDS	% max in the product	CAS	Classification
Resin/ dispersion	Silicic acid, potassium salt	≥25-≤40	13.5	1312-76-1	H315, H318
	5-cloro-2- metil-2H-isotiazol-3- one; 2-metil-2Hisotiazol-3- one (3:1)	< 0.0014	0.00063	55965-84-9	H301, H310, H314, H318, H317, H330, H400, H410
Additives	2-methylisothiazol-3(2H)-one	3-5	0.25	2682-20-4	H301, H311, H314, H318, H317, H330, H400, H410
	1,2-benzisothiazolin-3-one	3-5	0.25	2634-33-5	H302, H315, H318, H317, H400
	Maleic acid, polymer with diisobutene, sodium salt	25	1.25	37199-81-8	H319
	Cellulose, 2- hydroxyethyl ether	> 88	4.4	9004-62-0	No classify
	Gliossale	< 0,01	0.0005	107-22-2	H315, H319, H317, H332, H341

Table 3: Hazardous substances present in the products.

2. Environmental Information

Declared unit

The declared unit taken into consideration is 1 kg of paint, together with its packaging, which allows you to paint a certain internal wall surface.

System boundaries

This study is a "from cradle to gate with options" analysis. The PCR 2012: 01 v2.33 and the standard EN 15804 used identify the following phases for the life cycle of a construction product:

BUILDING LIFE CYCLE INFORMATION																SUPPLEMENTARY INFO
PRODUCT STAGE			CONSTRUCTION PROCESS STAGE		USE STAGE							END OF LIFE STAGE				BENEFIT AND LOAD
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Raw materials supply	Transport	Manufacturing	Transport	Construction and installation	Use	Maintenance	Repair	Replacement	refurbishment	operational energy use	operational water use	de-construction / demolition	Transport	Waste processing	Disposal	reuse, recovery or recycling
X	X	X	X	X	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd

Table 4: Information modules for the evaluation of construction products according to the EN15804 standard.

The *upstream* processes include the extraction and production of raw material for all the main components, the impacts due to the production of electricity, and the production of primary, secondary and tertiary packaging.

The *core* processes include the transport of materials to the production site, the assembly of the final product, the treatment of waste generated at the production site, and the impacts due to the production of electricity used in the module.

The *downstream* processes include transport for the distribution of the finished product, the use of resources to prepare the product and the end of life of the packaging.

The phase of application and drafting of the paint is excluded from the boundaries of the system because it consists of a manual operation of negligible impact. The use modules (B1-B7) were excluded because they were influenced by the conditions in which the products are used and the application surface. The modules relating to the end of life (C1-C4) were not considered as they concern processes, such as demolition and transport, which may vary outside the control of the company. The phase relating to recycling and energy recovery (D) is not applicable to the type of

product being evaluated, which is not considered recyclable as it is not possible to separate the color film from the supporting plaster.

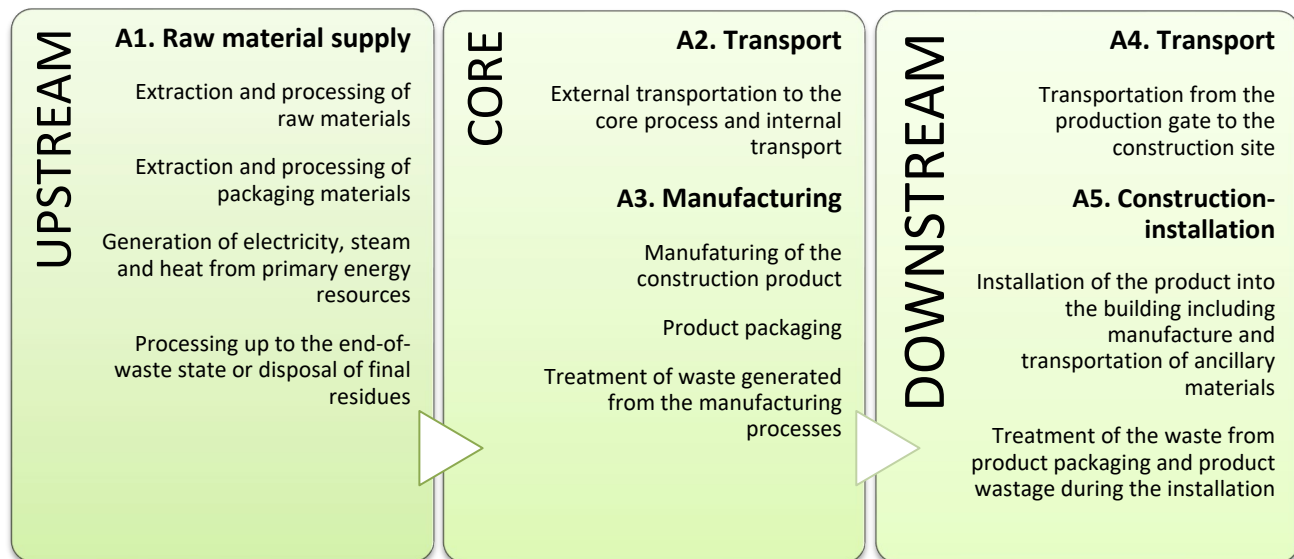


Figure 3: LCA system boundaries of 1kg of paint according to PCR 2012:01 v2.33.

Time boundaries

The primary data were provided by DAW Italy and refer to the year 2020. The secondary data come from the ecoinvent v3.7 database published in 2021.

Geographic representativeness

The DAW Italia production site is located in the Municipality of Vermezzo con Zelo, in the Province of Milan. Raw materials are purchased from various suppliers throughout Europe, although most of the suppliers are located on the national territory and in Germany. Packaging is purchased in about 80% of cases from suppliers in the country, the remaining 20% is purchased on German suppliers. The finished products object of this study are all formulated in Vermezzo con Zelo plant and are sold in the national territory.

Since the product is sold in Italy, the distribution scenario considers the sales of the reference year.

Boundaries in the life cycle

As expressed by the PCR 2012: 01 v2.33, the following processes are excluded from the LCA:

- construction of the company's buildings;
- production of work equipment;
- production of capital goods;
- personnel activities.

Infrastructures, when present, such as processes deriving from the ecoinvent database have not been excluded.

Data quality

Both primary and secondary data were used in the present study. Primary data are collected by DAW Italia in a continuously updated internal management system and provided through the compilation of questionnaires and direct communications; when primary data is not available, secondary data is used.

The ecoinvent v3.7 database, allocation, cut-off by classification and literature data are used for the secondary data used in the study. The ecoinvent database is available in the SimaPro 9.2 software used for the calculations.

The life cycle analysis must consider at least 99% of the total mass and energy flows of the product and its packaging. Proxy data can be used in case data gaps exist, as long as their contribution in the environmental performance assessment does not exceed 10% for each main impact category.

Allocation rules

Allocation represents the allocation procedure according to which the inputs and outputs of the system are divided among the different products in order to reflect the underlying physical relationships.

The processes that affect the environmental profile of the product during its life cycle must be allocated within the life cycle module in which the process takes place. In this way, the sum of the allocated inflows and outflows corresponds to the sum of the incoming and outgoing flows: double counting is avoided and no omission of incoming and outgoing flows occurs.

For virgin resources, raw materials and production processes are included. No allocation is made for materials subject to recycling. The recycling process is included for the input of recycled resources. Outputs subject to recycling are considered inputs for the next life cycle.

In this study, the data relating to energy and water consumption and waste produced, emissions into the atmosphere and water discharges were attributed based on the quantity of finished product formulated, adopting the mass criterion, obtained by comparing the consumption data per year with the total of kg of finished products formulated in the reference year.

The product formulation process involves the use of virgin raw materials and no waste is produced which is subsequently re-entered into the production cycle. Virgin packaging is used for the packaging phase. For these reasons, no end of life allocation was made.

Furthermore, during the study all the material inputs of the production process were evaluated, therefore no cut-off rules were applied.

Environmental impact indicators

In assessing the impact of the product, the information obtained from the inventory analysis is aggregated according to the effects relating to the various environmental issues. The method defined by the PCR 2012: 01 v2.33 was used to assess the environmental performance of the products.

The carbon neutrality approach is adopted for atmospheric CO₂ emissions from materials of biogenic origin. With this approach, it is assumed that all atmospheric CO₂ emissions absorbed during the process will be released into the air during the end-of-life phase. In practice, neither sequestrations nor CO₂ emissions related to materials of biological origin are evaluated, assuming a net carbon sequestration equal to zero.

Inventory

This study is based on primary data for the fundamental aspects of the study, such as composition of finished products (for instance type and quantity of different ingredients), the distances to supply raw materials, ingredients and packaging, company consumption (water, electricity and waste produced), and their quantities in the product, the distribution of the finished product and the application on site. Primary data were collected by questionnaire, exchange of e-mails with reference company personnel, and safety data sheets of raw materials and finished products.

The secondary data are used for all processes for which primary data are not available, for example the production of individual components and packaging, the processing of some raw materials and the disposal of packaging. Reference has been made to the database ecoinvent v.3.7, cut-off by classification.

As foreseen by the PCR 2012: 01 v2.33 the use of generic data (proxy data) has been limited and their contribution does not exceed 10% of the overall impact of the impact categories considered, as can be seen in the Annex 1 of the LCA report.

All the material inputs of the production process were evaluated. No cut-off rules were applied.

3. Environmental impact indicator

In the following tables are available the indicators of the environmental impact of the life cycle of 1 kg of paint for each product analyzed, as required by the PCR 2012: 01 v2.33.

The environmental indicators indicated by the PCR 2012: 01 v2.33 consist of:

- Impact categories: global warming, ozone depletion, acidification, eutrophication, photochemical ozone creation, depletion of abiotic resources, depletion of abiotic resources (fossil);
- Resource use indicators: resource consumption (renewable and non-renewable), use of secondary material, use of secondary fuels (renewable and non-renewable), use of water;
- Waste indicators: hazardous waste, non-hazardous waste and radioactive waste.

Impact categories come from the baseline CML and non-baseline CML methods.

The indicators are divided into the contribution of the processes to the different product phases: *upstream* processes (A1), relating to the procurement of raw materials, *core* processes (A2, A3) relating respectively to the transport of raw materials, to the production site, and to the production and packaging, and *downstream* processes (A4, A5) relating to distribution, product application and packaging disposal.

InnenColor



1 KG INNENCOLOR		u.m.	Total	A1	A2	A3	A4	A5
Impact categories	Global warming (GWP100a)	kg CO ₂ eq	1.78E+00	1.57E+00	5.16E-02	4.17E-02	5.26E-02	6.13E-02
	Ozone depletion (ODP)	Kg CFC ¹¹	1.91E-07	1.66E-07	9.38E-09	5.05E-09	9.55E-09	3.02E-10
	Acidification	kg SO ₂ eq	1.69E-02	1.64E-02	1.83E-04	1.16E-04	1.86E-04	1.61E-05
	Eutrophication	kg PO ₄ ³⁻ eq	2.63E-03	2.36E-03	3.70E-05	5.89E-05	3.77E-05	1.40E-04
	Photochemical ozone creation	kg C ₂ H ₄ eq	8.46E-04	8.25E-04	6.52E-06	6.76E-06	6.64E-06	1.30E-06
	Depletion of abiotic resources	kg Sb eq	1.82E-05	1.77E-05	1.88E-07	8.07E-08	1.91E-07	6.37E-09
	Depletion of abiotic resources, fossil	MJ	2.37E+01	2.15E+01	7.71E-01	6.03E-01	7.85E-01	2.59E-02
Use of resources	Renewable resources, energy	MJ	3.36E+00	3.31E+00	1.06E-02	2.44E-02	1.08E-02	9.03E-04
	Renewable resources, raw materials	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Renewable resources, total	MJ	3.36E+00	3.31E+00	1.06E-02	2.44E-02	1.08E-02	9.03E-04
	Non renewable resources, energy	MJ	4.39E-04	3.98E-04	1.62E-05	8.42E-06	1.65E-05	3.64E-07
	Non renewable resources, raw materials	MJ	2.68E+01	2.46E+01	7.88E-01	6.10E-01	8.03E-01	2.74E-02
	Non renewable resources, total	MJ	2.68E+01	2.46E+01	7.88E-01	6.10E-01	8.03E-01	2.74E-02
	Use of secondary material	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Use of renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Use of non renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Use of net fresh water	m ³	2.94E-02	2.84E-02	8.52E-05	4.16E-04	8.67E-05	3.46E-04
Waste	Hazardous waste	kg	5.98E-03	4.94E-03	4.41E-05	3.72E-04	4.49E-05	5.77E-04
	Non hazardous waste	kg	6.89E-01	5.68E-01	3.77E-02	9.75E-03	3.84E-02	3.54E-02
	Radioactive waste	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table 5: Results of the characterization of 1 kg di InnenColor.

CapaGips



1 KG CAPAGIPS		u.m.	Total	A1	A2	A3	A4	A5
Impact categories	Global warming (GWP100a)	kg CO ₂ eq	1.69E+00	1.46E+00	7.89E-02	4.17E-02	5.26E-02	5.31E-02
	Ozone depletion (ODP)	Kg CFC ¹¹	1.41E-07	1.12E-07	1.43E-08	5.04E-09	9.55E-09	2.48E-10
	Acidification	kg SO ₂ eq	1.89E-02	1.84E-02	2.79E-04	1.16E-04	1.86E-04	1.32E-05
	Eutrophication	kg PO ₄ ³⁻ eq	2.71E-03	2.43E-03	5.66E-05	5.88E-05	3.77E-05	1.23E-04
	Photochemical ozone creation	kg C ₂ H ₄ eq	1.71E-03	1.68E-03	9.97E-06	6.76E-06	6.64E-06	8.14E-07
	Depletion of abiotic resources	kg Sb eq	1.25E-05	1.19E-05	2.87E-07	8.06E-08	1.91E-07	5.11E-09
	Depletion of abiotic resources, fossil	MJ	2.41E+01	2.15E+01	1.18E+00	6.03E-01	7.85E-01	2.16E-02
Use of resources	Renewable resources, energy	MJ	2.77E+00	2.72E+00	1.62E-02	2.44E-02	1.08E-02	6.75E-04
	Renewable resources, raw materials	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Renewable resources, total	MJ	2.77E+00	2.72E+00	1.62E-02	2.44E-02	1.08E-02	6.75E-04
	Non renewable resources, energy	MJ	3.17E-04	2.67E-04	2.48E-05	8.42E-06	1.65E-05	2.94E-07
	Non renewable resources, raw materials	MJ	2.67E+01	2.40E+01	1.20E+00	6.10E-01	8.03E-01	2.27E-02
	Non renewable resources, total	MJ	2.67E+01	2.40E+01	1.20E+00	6.10E-01	8.03E-01	2.27E-02
	Use of secondary material	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Use of renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Use of non renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Use of net fresh water	m ³	3.10E-02	3.01E-02	1.30E-04	4.16E-04	8.67E-05	2.32E-04
Waste	Hazardous waste	kg	6.74E-03	5.72E-03	6.74E-05	3.72E-04	4.49E-05	5.41E-04
	Non hazardous waste	kg	7.69E-01	6.32E-01	5.77E-02	9.75E-03	3.84E-02	3.13E-02
	Radioactive waste	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table 6: Results of the characterization of 1 kg di CapaGips

Capaweiss



1 KG CAPAWEISS		u.m.	Total	A1	A2	A3	A4	A5
Impact categories	Global warming (GWP100a)	kg CO ₂ eq	1.59E+00	1.41E+00	3.81E-02	4.19E-02	5.26E-02	4.77E-02
	Ozone depletion (ODP)	Kg CFC ¹¹	1.74E-07	1.52E-07	6.93E-09	5.07E-09	9.55E-09	1.99E-10
	Acidification	kg SO ₂ eq	1.06E-02	1.02E-02	1.35E-04	1.17E-04	1.86E-04	1.07E-05
	Eutrophication	kg PO ₄ ³⁻ eq	2.10E-03	1.87E-03	2.73E-05	5.91E-05	3.77E-05	1.06E-04
	Photochemical ozone creation	kg C ₂ H ₄ eq	5.67E-04	5.48E-04	4.82E-06	6.80E-06	6.64E-06	6.73E-07
	Depletion of abiotic resources	kg Sb eq	1.87E-05	1.82E-05	1.39E-07	8.10E-08	1.91E-07	4.06E-09
	Depletion of abiotic resources, fossil	MJ	1.87E+01	1.67E+01	5.70E-01	6.06E-01	7.85E-01	1.73E-02
Use of resources	Renewable resources, energy	MJ	2.59E+00	2.55E+00	7.84E-03	2.46E-02	1.08E-02	5.11E-04
	Renewable resources, raw materials	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Renewable resources, total	MJ	2.59E+00	2.55E+00	7.84E-03	2.46E-02	1.08E-02	5.11E-04
	Non renewable resources, energy	MJ	2.39E-04	2.02E-04	1.20E-05	8.43E-06	1.65E-05	2.28E-07
	Non renewable resources, raw materials	MJ	2.15E+01	1.94E+01	5.82E-01	6.14E-01	8.03E-01	1.81E-02
	Non renewable resources, total	MJ	2.15E+01	1.94E+01	5.82E-01	6.14E-01	8.03E-01	1.81E-02
	Use of secondary material	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Use of renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Use of non renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Use of net fresh water	m ³	2.03E-02	1.96E-02	6.30E-05	4.17E-04	8.67E-05	1.37E-04
Waste	Hazardous waste	kg	4.76E-03	3.84E-03	3.26E-05	3.72E-04	4.49E-05	4.64E-04
	Non hazardous waste	kg	4.52E-01	3.49E-01	2.79E-02	9.75E-03	3.84E-02	2.66E-02
	Radioactive waste	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table 7: Results of the characterization of 1 kg di Capaweiss.

CapaWeiss-W



1 KG CAPAWEISS-W		u.m.	Total	A1	A2	A3	A4	A5
Impact categories	Global warming (GWP100a)	kg CO ₂ eq	1.65E+00	1.47E+00	3.90E-02	4.17E-02	5.26E-02	4.80E-02
	Ozone depletion (ODP)	Kg CFC ⁻¹¹	3.81E-07	3.59E-07	7.08E-09	5.04E-09	9.55E-09	2.00E-10
	Acidification	kg SO ₂ eq	1.14E-02	1.09E-02	1.38E-04	1.16E-04	1.86E-04	1.08E-05
	Eutrophication	kg PO ₄ ³⁻ eq	2.26E-03	2.02E-03	2.79E-05	5.88E-05	3.77E-05	1.07E-04
	Photochemical ozone creation	kg C ₂ H ₄ eq	6.14E-04	5.95E-04	4.92E-06	6.76E-06	6.64E-06	6.76E-07
	Depletion of abiotic resources	kg Sb eq	2.81E-05	2.77E-05	1.42E-07	8.06E-08	1.91E-07	4.05E-09
	Depletion of abiotic resources, fossil	MJ	1.97E+01	1.77E+01	5.82E-01	6.03E-01	7.85E-01	1.74E-02
Use of resources	Renewable resources, energy	MJ	2.69E+00	2.64E+00	8.01E-03	2.44E-02	1.08E-02	4.94E-04
	Renewable resources, raw materials	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Renewable resources, total	MJ	2.69E+00	2.64E+00	8.01E-03	2.44E-02	1.08E-02	4.94E-04
	Non renewable resources, energy	MJ	2.52E-04	2.15E-04	1.22E-05	8.42E-06	1.65E-05	2.29E-07
	Non renewable resources, raw materials	MJ	2.26E+01	2.06E+01	5.95E-01	6.10E-01	8.03E-01	1.81E-02
	Non renewable resources, total	MJ	2.26E+01	2.06E+01	5.95E-01	6.10E-01	8.03E-01	1.81E-02
	Use of secondary material	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Use of renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Use of non renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Use of net fresh water	m ³	2.10E-02	2.04E-02	6.43E-05	4.16E-04	8.67E-05	1.07E-04
Waste	Hazardous waste	kg	4.92E-03	4.01E-03	3.33E-05	3.72E-04	4.49E-05	4.59E-04
	Non hazardous waste	kg	4.61E-01	3.58E-01	2.85E-02	9.75E-03	3.84E-02	2.68E-02
	Radioactive waste	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table 8: Results of the characterization of 1 kg di CapaWeiss-W.

CapaMatt



1 KG CAPAMATT		u.m.	Total	A1	A2	A3	A4	A5
Impact categories	Global warming (GWP100a)	kg CO ₂ eq	1.72E+00	1.46E+00	1.01E-01	4.17E-02	5.26E-02	6.31E-02
	Ozone depletion (ODP)	Kg CFC ⁻¹¹	2.06E-07	1.72E-07	1.84E-08	5.05E-09	9.55E-09	3.34E-10
	Acidification	kg SO ₂ eq	2.23E-02	2.17E-02	3.59E-04	1.16E-04	1.86E-04	1.75E-05
	Eutrophication	kg PO ₄ ³⁻ eq	2.88E-03	2.56E-03	7.26E-05	5.89E-05	3.77E-05	1.48E-04
	Photochemical ozone creation	kg C ₂ H ₄ eq	1.07E-03	1.04E-03	1.28E-05	6.76E-06	6.64E-06	1.58E-06
	Depletion of abiotic resources	kg Sb eq	1.42E-05	1.36E-05	3.68E-07	8.07E-08	1.91E-07	6.77E-09
	Depletion of abiotic resources, fossil	MJ	2.67E+01	2.38E+01	1.51E+00	6.03E-01	7.85E-01	2.79E-02
Use of resources	Renewable resources, energy	MJ	3.88E+00	3.82E+00	2.08E-02	2.44E-02	1.08E-02	8.42E-04
	Renewable resources, raw materials	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Renewable resources, total	MJ	3.88E+00	3.82E+00	2.08E-02	2.44E-02	1.08E-02	8.42E-04
	Non renewable resources, energy	MJ	5.87E-04	5.30E-04	3.18E-05	8.42E-06	1.65E-05	4.03E-07
	Non renewable resources, raw materials	MJ	2.95E+01	2.65E+01	1.55E+00	6.11E-01	8.03E-01	2.91E-02
	Non renewable resources, total	MJ	2.95E+01	2.65E+01	1.55E+00	6.11E-01	8.03E-01	2.91E-02
	Use of secondary material	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Use of renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Use of non renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Use of net fresh water	m ³	3.60E-02	3.52E-02	1.67E-04	4.16E-04	8.67E-05	1.27E-04
Waste	Hazardous waste	kg	7.07E-03	6.02E-03	8.64E-05	3.72E-04	4.49E-05	5.48E-04
	Non hazardous waste	kg	9.13E-01	7.52E-01	7.40E-02	9.75E-03	3.84E-02	3.81E-02
	Radioactive waste	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table 9: Results of the characterization of 1 kg di CapaMatt.

CapaTex Matt 5



1 KG CAPATEX MATT 5		u.m.	Totale	A1	A2	A3	A4	A5
Impact categories	Global warming (GWP100a)	kg CO ₂ eq	2.15E+00	1.89E+00	1.08E-01	4.17E-02	5.26E-02	6.01E-02
	Ozone depletion (ODP)	Kg CFC ⁻¹¹	2.34E-07	2.00E-07	1.97E-08	5.05E-09	9.55E-09	2.95E-10
	Acidification	kg SO ₂ eq	2.62E-02	2.55E-02	3.83E-04	1.16E-04	1.86E-04	1.56E-05
	Eutrophication	kg PO ₄ ³⁻ eq	3.64E-03	3.32E-03	7.75E-05	5.89E-05	3.77E-05	1.38E-04
	Photochemical ozone creation	kg C ₂ H ₄ eq	3.47E-03	3.44E-03	1.37E-05	6.76E-06	6.64E-06	1.23E-06
	Depletion of abiotic resources	kg Sb eq	1.59E-05	1.52E-05	3.93E-07	8.07E-08	1.91E-07	6.00E-09
	Depletion of abiotic resources, fossil	MJ	3.47E+01	3.17E+01	1.62E+00	6.03E-01	7.85E-01	2.50E-02
Use of resources	Renewable resources, energy	MJ	3.62E+00	3.57E+00	2.22E-02	2.44E-02	1.08E-02	7.53E-04
	Renewable resources, raw materials	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Renewable resources, total	MJ	3.62E+00	3.57E+00	2.22E-02	2.44E-02	1.08E-02	7.53E-04
	Non renewable resources, energy	MJ	5.31E-04	4.71E-04	3.40E-05	8.42E-06	1.65E-05	3.53E-07
	Non renewable resources, raw materials	MJ	3.79E+01	3.49E+01	1.65E+00	6.11E-01	8.03E-01	2.62E-02
	Non renewable resources, total	MJ	3.79E+01	3.49E+01	1.65E+00	6.11E-01	8.03E-01	2.62E-02
	Use of secondary material	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Use of renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Use of non renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Use of net fresh water	m ³	4.17E-02	4.08E-02	1.79E-04	4.16E-04	8.67E-05	1.54E-04
Waste	Hazardous waste	kg	8.39E-03	7.25E-03	9.23E-05	3.72E-04	4.49E-05	6.35E-04
	Non hazardous waste	kg	1.03E+00	8.64E-01	7.91E-02	9.75E-03	3.84E-02	3.51E-02
	Radioactive waste	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table 10: Results of the characterization of 1 kg di CapaTex Matt 5.

CapaTop



1 KG CAPATOP		u.m.	Total	A1	A2	A3	A4	A5
Impact categories	Global warming (GWP100a)	kg CO ₂ eq	2.18E+00	1.91E+00	1.08E-01	4.17E-02	5.26E-02	6.70E-02
	Ozone depletion (ODP)	Kg CFC ¹¹	2.36E-07	2.01E-07	1.97E-08	5.05E-09	9.55E-09	3.39E-10
	Acidification	kg SO ₂ eq	2.63E-02	2.56E-02	3.83E-04	1.16E-04	1.86E-04	1.79E-05
	Eutrophication	kg PO ₄ ³⁻ eq	3.68E-03	3.36E-03	7.75E-05	5.89E-05	3.77E-05	1.53E-04
	Photochemical ozone creation	kg C ₂ H ₄ eq	3.47E-03	3.44E-03	1.37E-05	6.76E-06	6.64E-06	1.63E-06
	Depletion of abiotic resources	kg Sb eq	1.60E-05	1.53E-05	3.93E-07	8.07E-08	1.91E-07	6.92E-09
	Depletion of abiotic resources, fossil	MJ	3.54E+01	3.24E+01	1.62E+00	6.03E-01	7.85E-01	2.83E-02
Use of resources	Renewable resources, energy	MJ	4.11E+00	4.05E+00	2.22E-02	2.44E-02	1.08E-02	8.81E-04
	Renewable resources, raw materials	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Renewable resources, total	MJ	4.11E+00	4.05E+00	2.22E-02	2.44E-02	1.08E-02	8.81E-04
	Non renewable resources, energy	MJ	6.59E-04	6.00E-04	3.40E-05	8.42E-06	1.65E-05	4.08E-07
	Non renewable resources, raw materials	MJ	3.87E+01	3.56E+01	1.65E+00	6.11E-01	8.03E-01	2.96E-02
	Non renewable resources, total	MJ	3.87E+01	3.56E+01	1.65E+00	6.11E-01	8.03E-01	2.96E-02
	Use of secondary material	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Use of renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Use of non renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Use of net fresh water	m ³	4.20E-02	4.12E-02	1.79E-04	4.16E-04	8.67E-05	1.58E-04
Waste	Hazardous waste	kg	8.31E-03	7.25E-03	9.23E-05	3.72E-04	4.49E-05	5.54E-04
	Non hazardous waste	kg	1.03E+00	8.64E-01	7.91E-02	9.75E-03	3.84E-02	3.87E-02
	Radioactive waste	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table 11: Results of the characterization of 1 kg di CapaTop.

CapaTex Satin 20



1 KG CAPATEX SATIN 20		u.m.	Total	A1	A2	A3	A4	A5
Impact categories	Global warming (GWP100a)	kg CO ₂ eq	2.08E+00	1.85E+00	6.61E-02	4.17E-02	5.26E-02	6.17E-02
	Ozone depletion (ODP)	Kg CFC ¹¹	2.15E-07	1.88E-07	1.20E-08	5.05E-09	9.55E-09	3.08E-10
	Acidification	kg SO ₂ eq	2.28E-02	2.22E-02	2.34E-04	1.16E-04	1.86E-04	1.62E-05
	Eutrophication	kg PO ₄ ³⁻ eq	3.19E-03	2.90E-03	4.74E-05	5.89E-05	3.77E-05	1.43E-04
	Photochemical ozone creation	kg C ₂ H ₄ eq	1.15E-03	1.13E-03	8.35E-06	6.76E-06	6.64E-06	1.20E-06
	Depletion of abiotic resources	kg Sb eq	1.85E-05	1.80E-05	2.40E-07	8.07E-08	1.91E-07	6.16E-09
	Depletion of abiotic resources, fossil	MJ	3.61E+01	3.37E+01	9.87E-01	6.03E-01	7.85E-01	2.60E-02
Use of resources	Renewable resources, energy	MJ	3.71E+00	3.66E+00	1.36E-02	2.44E-02	1.08E-02	7.37E-04
	Renewable resources, raw materials	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Renewable resources, total	MJ	3.71E+00	3.66E+00	1.36E-02	2.44E-02	1.08E-02	7.37E-04
	Non renewable resources, energy	MJ	4.62E-04	4.16E-04	2.08E-05	8.42E-06	1.65E-05	3.69E-07
	Non renewable resources, raw materials	MJ	3.96E+01	3.71E+01	1.01E+00	6.11E-01	8.03E-01	2.71E-02
	Non renewable resources, total	MJ	3.96E+01	3.71E+01	1.01E+00	6.11E-01	8.03E-01	2.71E-02
	Use of secondary material	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Use of renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Use of non renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Use of net fresh water	m ³	4.12E-02	4.04E-02	1.09E-04	4.16E-04	8.67E-05	1.05E-04
Waste	Hazardous waste	kg	7.62E-03	6.46E-03	5.64E-05	3.72E-04	4.49E-05	6.86E-04
	Non hazardous waste	kg	8.92E-01	7.59E-01	4.83E-02	9.75E-03	3.84E-02	3.67E-02
	Radioactive waste	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table 12: Results of the characterization of 1 kg di CapaTex Satin 20.

DeckWeiss-W



1 KG DECKWEISS-W		u.m.	Total	A1	A2	A3	A4	A5
Impact categories	Global warming (GWP100a)	kg CO ₂ eq	1.87E+00	1.67E+00	5.29E-02	4.17E-02	5.26E-02	5.41E-02
	Ozone depletion (ODP)	Kg CFC ¹¹	3.99E-07	3.75E-07	9.62E-09	5.04E-09	9.55E-09	3.01E-10
	Acidification	kg SO ₂ eq	1.76E-02	1.71E-02	1.87E-04	1.16E-04	1.86E-04	1.58E-05
	Eutrophication	kg PO ₄ ³⁻ eq	2.77E-03	2.51E-03	3.79E-05	5.88E-05	3.77E-05	1.20E-04
	Photochemical ozone creation	kg C ₂ H ₄ eq	9.00E-04	8.78E-04	6.69E-06	6.76E-06	6.64E-06	2.03E-06
	Depletion of abiotic resources	kg Sb eq	2.85E-05	2.80E-05	1.93E-07	8.06E-08	1.91E-07	6.45E-09
	Depletion of abiotic resources, fossil	MJ	2.49E+01	2.27E+01	7.91E-01	6.03E-01	7.85E-01	2.49E-02
Use of resources	Renewable resources, energy	MJ	2.75E+00	2.70E+00	1.09E-02	2.44E-02	1.08E-02	9.26E-04
	Renewable resources, raw materials	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Renewable resources, total	MJ	2.75E+00	2.70E+00	1.09E-02	2.44E-02	1.08E-02	9.26E-04
	Non renewable resources, energy	MJ	2.89E-04	2.47E-04	1.66E-05	8.42E-06	1.65E-05	3.66E-07
	Non renewable resources, raw materials	MJ	2.82E+01	2.59E+01	8.08E-01	6.10E-01	8.03E-01	2.64E-02
	Non renewable resources, total	MJ	2.82E+01	2.59E+01	8.08E-01	6.10E-01	8.03E-01	2.64E-02
	Use of secondary material	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Use of renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Use of non renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Use of net fresh water	m ³	3.03E-02	2.94E-02	8.74E-05	4.16E-04	8.67E-05	2.73E-04
Waste	Hazardous waste	kg	6.11E-03	5.08E-03	4.52E-05	3.72E-04	4.49E-05	5.64E-04
	Non hazardous waste	kg	6.95E-01	5.77E-01	3.87E-02	9.75E-03	3.84E-02	3.16E-02
	Radioactive waste	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table 13: Results of the characterization of 1 kg di Deckweiss-W.

4. Differences from previous versions

Revision of 6-10-2021

Compared to the previous version of this EPD:

1. The PCR 2012: 01 v2.32, which expired on 31-12-20, have been replaced by the PCR 2012: 01 v2.33, valid until 31-12-21.
2. The ecoinvent v3.7 database and the SimaPro 9.2 software were used.
3. Descriptions of analyzed products have been added.
4. Modeling and LCA results take into account all product formats.
5. Regarding the upstream processes:
 - the weight of the handle was considered in full, when present in the considered format;
 - the dispersing agent component was modeled on the basis of the information contained in the safety data sheet;
6. Regarding the core processes: the actual distance of suppliers from the production site for each component and packaging material was considered;
7. Regarding the downstream processes: for the transport phase of the finished product (national distribution) the company sales statistics were considered divided by macro area, each identified by a kilometer average.
8. Premium 50 has not been entered because the product has been discontinued.

5. Contact and other information

DAW Italia contacts

The LCA study and this EPD were carried out by DAW Italia, in collaboration with 2B Srl (www.to-be.it).

The company references are:

Lissi Andrea

DAW Italia, the owner of the EPD has sole ownership and responsibility of the EPD

Largo Murjahn, 1 - 20071 Vermezzo con Zelo (MI)

e-mail: Andrea.Lissi@dawitalia.it

web-site: www.dawitalia.it/

Verify and registration

EPD programme: International EPD System, www.environdec.com Programme operator: EPD International AB, Box 210 60, SE-100 31 Stockholm, Sweden, info@environdec.com
Product category rules (PCR): PCR 2012:01 v2.33 "Construction product and construct services" CPC code: 3511 (Paints and varnishes and related products)
PCR review was conducted by: The Technical Committee of the International EPD® System. Review chair: Massimo Marino (info@environdec.com). The review panel may be contacted via the Secretariat www.environdec.com/contact .
Independent third-party verification of the declaration and data, according to ISO 14025:2006: <input checked="" type="checkbox"/> External <input type="checkbox"/> Internal covering <input type="checkbox"/> EPD process certification <input checked="" type="checkbox"/> EPD verification
Third party verifier: Certiquality SRL, Via Gaetano Giardino, 4, 20123 Milano (MI), 02 806 9171 <i>In case of certification bodies</i> Accredited by: Accredia con accreditamento 003H rev. 15 <i>In case of individual verifiers</i> Approved by: The International EPD® System Technical Committee, supported by the Secretariat
Procedure for follow-up during EPD validity involves third party verifier: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Environmental product declarations within the same product category from different programs may not be comparable.

EPDs of construction products may not be comparable if they do not comply with EN 15804.

6. Bibliography

- ISO 14025:2006. Environmental labels and declarations, type 3 environmental declarations, principles and procedures (www.iso.org).
- ISO 14040/14044:2021. ISO series on Life Cycle Assessment (Valutazione del ciclo di vita), UNI EN ISO 14040:2021 e 14044:2021 (www.iso.org).
- PCR 2012:01 v2.33 “Costruction product and costruction services”, Product Category Rules (PCR) for preparing an environmental product declaration (EPD) for construction products and construction services, the Swedish Environmental Management Council (www.environdec.com).
- EN 15804:2012+A1:2013, Sustainability of construction works. Environmental product declarations. Core rules for the product category of construction products, dated 2014-02-28.
- Ecoinvent, 2021. Swiss Centre for Life Cycle Assessment, v3.7 (www.ecoinvent.ch).
- PRé Consultants, 2021. Software SimaPro versione 9.2 (www.pre.nl).
- IEC, 2019. International EPD Cooperation (IEC), General Programme Instructions for Environmental Product Declaration EPD, Version 3.01, dated 2017-09-18. Swedish Environmental Management Council (www.environdec.com).
- ISPRA, 2019. Rapporto Rifiuti Urbani. (www.isprambiente.gov.it).