Environmental Product Declaration

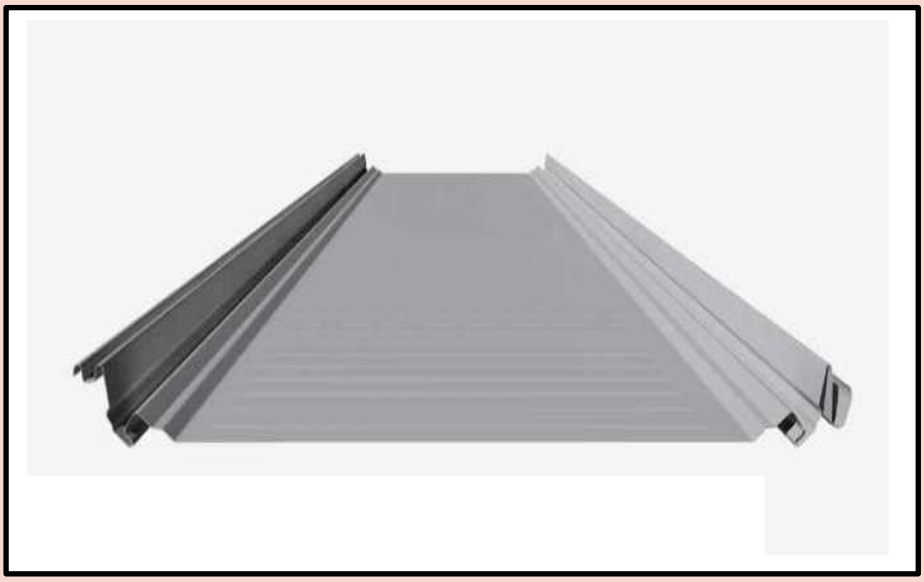
In accordance with ISO 14025 and EN 15804:2012+A2:2019 for:

RIVERCLACK® 550

from

ISCOM S.p.A.

Via Belvedere 78, Pescantina (VR) – Italy



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An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at www.environdec.com

General information

Programme information

Programme:	The International EPD® System
Address:	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
Website:	www.environdec.com
E-mail:	info@environdec.com

ISO standard ISO 21930 and CEN standard EN 15804 serves as the Core Product Category Rules (PCR)
Product category rules (PCR): Construction products, PCR 2019:14 version 1.11
PCR review was conducted by: The Technical Committee of the International EPD® System. See www.environdec.com/TC for a list of member. Review chair: Claudia A. Peña, University of Concepción, Chile. 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: ☒ External ☐ Internal covering ☐ EPD process certification ☒ EPD verification
Third party verifier: Marcel Gómez Ferrer, Marcel Gómez Consultoria Ambiental, info@marcelgomez.com Approved by: The International EPD® System
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 from different programmes may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804. For further information about comparability, see EN 15804 and ISO 14025.

Name and contact information of LCA practitioners:
Bureau Veritas Nexta srl
www.nexta.bureauveritas.it

Company information

Owner of the EPD: ISCOM S.p.A.

Contact: Flavio Bianchi, email: quality@iscom.it

Description of the organisation: ISCOM S.p.A. is an Italian company, leader in the production and marketing of metal roofing system.
ISCOM S.p.A. was born in the 1964 as a company dedicated to the production of fibre cement industrial roofing. From 1970 in the production was included the metal roofing as aluminium alloys, copper, stainless steel.
After years of study and research in the 1987 was born the actual main product of ISCOM: RIVERCLACK®, a metal coverage with drainage joint for flat roofs (worldwide patent), which over times improved in characteristics and performance.
The company is located in Verona and covers an area of 25.000 m^2, including a design and development department, research laboratories, testing centre. The ISCOM products can be installed from airports to shopping center, stadium, industrial and residential buildings.
ISCOM S.p.A. is certified ISO 9001:2015, ISO 14001:2015, ISO 45001:2018.

More information: www.riverclack.com

Name and location of production site:
ISCOM S.p.A.
Via Belvedere 78
37026 Pescantina (VR), Italy
T. +39 045 773 21 77
info@iscom.it

Product information

Product name: Riverclack® 550

Product description and identification: The Riverclack® 550 is a flat metal roofing system. The product has been on the market for nearly 30 years now and has proven itself in some of the world's most challenging climatic conditions. The patented drainage channel incorporated in the Riverclack® panels means the system can be installed on long, flat roofs by eliminating the risk of ponding, whilst the special resin based clips used for installation allow for free thermal expansion of the panels without running the risk of damaging the clips or panels themselves. The plates can be profiled directly in worksite. The Riverclack® design means that no specialist equipment or personnel are required for the installation. There is no pre-assembly of the clips (they are automatically placed in line with each panel during installation), and insulation can also be installed continuously, minimizing thermal bridging. The special Riverclack® snap-fit ("clack") system means that panels are able to expand and contract according to thermal conditions without sustaining any damage through friction between the panels themselves or against the clips. The Riverclack 550® plate can be made with different metal raw materials and different thicknesses according to the customer's requests.

The Riverclack® 550 plates included in the LCA study are:

N.	Metal	Thickness	Kg/m²
1	Aluminium plate	0,7 mm	2,52
		0,8 mm	2,93
		0,9 mm	3,31
		1,0 mm	3,68
2	Pre-painted aluminium plate	0,7 mm	2,52
		0,8 mm	2,93
		0,9 mm	3,31
		1,0 mm	3,68
3	Galvanized steel plate	0,5 mm	5,23
		0,6 mm	6,32
		0,7 mm	7,40
		0,8 mm	8,49
4	Copper plate	0,6 mm	7,15
		0,7 mm	8,38
		0,8 mm	9,61
5	Stainless steel A2 plate	0,5 mm	5,32
		0,6 mm	6,43
		0,7 mm	7,54
6	Stainless steel A4 plate	0,5 mm	5,32
		0,6 mm	6,43
		0,7 mm	7,54
7	Steel Corten plate	0,6 mm	6,32
		0,8 mm	8,49
8	Titanium zinc plate	0,8 mm	7,76
		1,0 mm	9,75

UN CPC code: 42190 and 42999

Geographical scope: Global
The pretended communication of the EPD is B2B

Technical specification:
The characteristics are in conformity with the standards UNI EN 14782:2006 “Self-supporting metal sheet for roofing, external cladding and internal lining - Product specification and requirements”.

The technical characteristics of the products are:

Materials	Thermal expansion	Standard
Aluminium alloy (EN AW 5754 H18)	24 x 10-6 K-1	UNI EN 508_2
Aluminium alloy (EN AW 5754 H48)	24 x 10-6 K-1	UNI EN 508_2
Copper	16,8 x 10-6 K-1	UNI EN 506
Stainless steel AISI 304	10,0-17,0 x 10-6 K-1	UNI EN 508_3
Stainless steel AISI 316	10,0-17,0 x 10-6 K-1	UNI EN 508_3
Galvanized steel	11 x 10-6 K-1	UNI EN 508_1
Steel Corten (A)	11,7 x 10-6 K-1	
Titanium zinc alloy	22 10-6 K-1	UNI EN 506

The product is waterproof to water, steam and air. The class of fire reaction is A1.

LCA information

Declared unit: 1 m^2 of metal roofing with relative locking system (clips and screws)
The study comprises the raw material extraction, raw material transportation, manufacturing, transportation to costumer, installation, end-of-life of product.

Reference service life: 70 years (average scenario of life of a building in the construction sector).

Time representativeness: primary data refer to 2020 year. The generic data has been updated in 2019 (Ecoinvent 3.6).

Geographical representativeness: primary data are obtained from ISCOM management system. The secondary data are obtained by database Ecoinvent 3.6 (RER or GLO records).

Technological representativeness: primary data are obtained from processes and products of ISCOM under study. The secondary data are obtained from databases of ISCOM similar technology.

Database(s) and LCA software used: for the elaboration of data SimaPro v. 9.1.0.8; the database used is Ecoinvent 3.6.

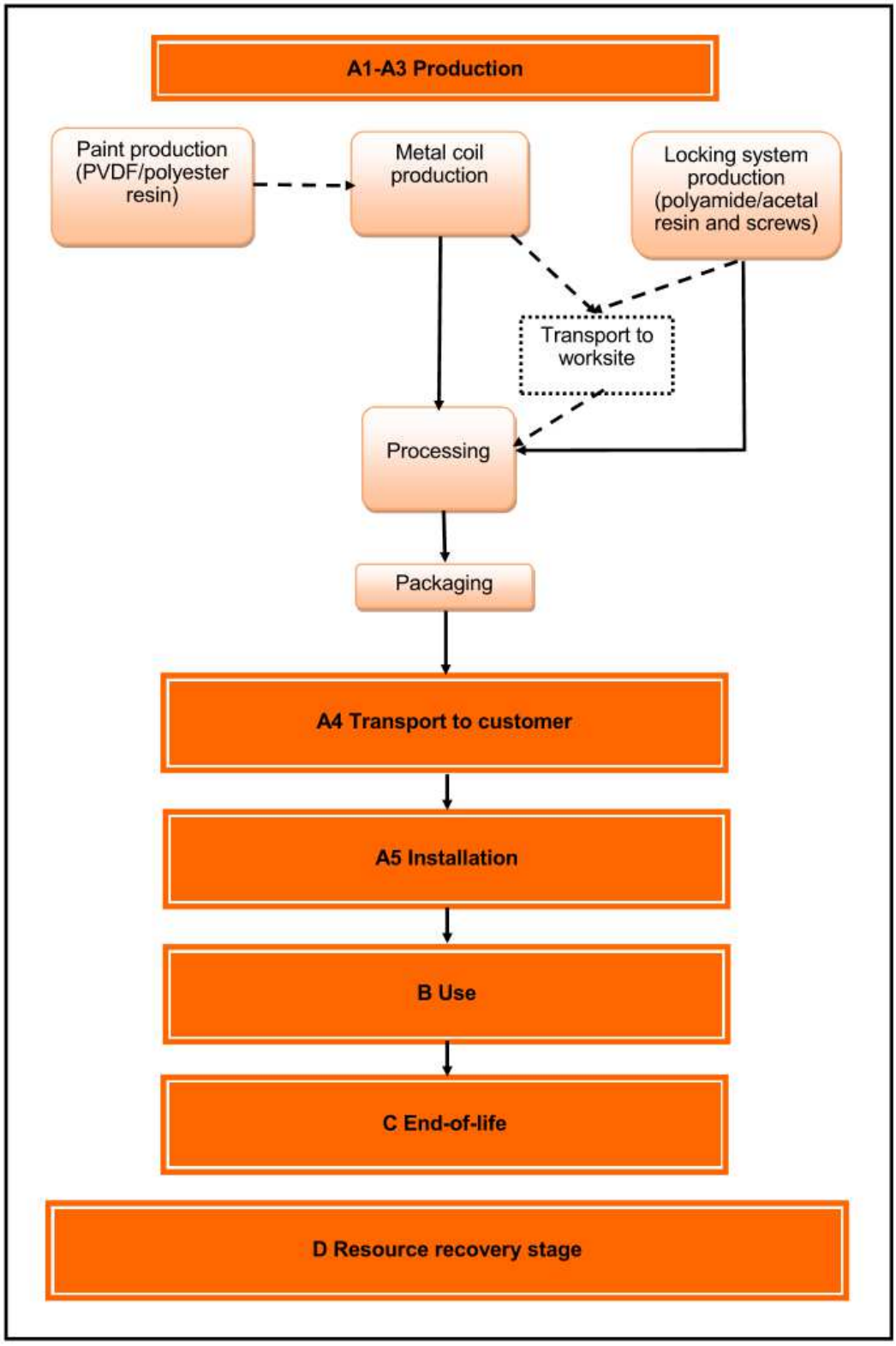
Description of system boundaries: Cradle to grave and module D (A+B+C+D)

Excluded lifecycle stages: all life stages are included in the LCA study

More information: www.riverclack.com

System boundary is presented in the flow chart below.
The manufacturing process consists in profiling of metal coils that allows the creation of metal element with vary lengths (from few meters up to 30 meters and more).
The manufacturing process can be summarised in the following steps:

- Loading of the metal coil on the reel of the forming machine by a bridge crane;
- Insertion of the initial part of the coil into the profiling machine;
- Profiling machine setting;
- Creation of the profile of the plate through successive passages in profiling stations;
- Cutting on size of the plate;
- Packaging of the final plate.


A1-A3 Production
Paint production (PVDF/polyester resin)
Metal coil production
Locking system production (polyamide/acetal resin and screws)
Transport to worksite
Processing
Packaging
A4 Transport to customer
A5 Installation
B Use
C End-of-life
D Resource recovery stage

Additional information:

- The allocation is applied in the LCA study: when necessary, mass allocation is used.
- Electricity: the supplier energy mix in the 2020 is used in production phase. 1 kWh - low voltage = 0,442 Kg CO_2eq, 1 kWh – medium voltage = 0,432 kg CO_2eq.
- Cut-off: at least 95% of the energy and materials used by module has been introduced, as well as 99% of the total use of energy and materials
- The modularity principle, as well as the polluter payer principle have been followed
- The long-term emissions have not been included.
- The next processes have not been included since its impact is not significant:
    - Environmental impact from infrastructure, construction, production equipment, and tools that are not directly consumed in the production process.
    - Personnel-related impacts, such as transportation to and from work.
- The impact method used are:
    - EN 15804+A2 v.1.00
    - Cumulative energy demand v. 1.00 for resource use
    - EDIP 2003 v. 1.07 for waste production.

The verifier and the program operator do not make any claim nor have any responsibility of the legality of the product.

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

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

	Product stage			Construction process stage		Use stage							End of life stage				Resource recovery stage
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
Module	**A1**	**A2**	**A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Modules declared	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Geography	Europe	Italy	Italy	Global	Global	Global	Global	Global	Global	Global	Global	Global	Global	Global	Global	Global	Global
Specific data used	Yes					-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	Variability in terms of GWP is: 33,6% inside the natural aluminium plates family, 31,1% inside the pre-painted aluminium plates, 47,2% inside the galvanized steel plates, 24% inside copper plates, 25,9% inside stainless steel A2 plates, 27,1% inside stainless steel A4 plates, 19,4% inside the steel Corten plates, 19,2% inside titanium zinc plates.					-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	One manufacturing site – not relevant					-	-	-	-	-	-	-	-	-	-	-	-

The variability within each product family (depending on specific metal as raw material) is calculated according to the GWP impact (most impacting product vs the least impacting product).

- Module A1 – Raw material production: this module includes the extraction of raw materials. The module includes also the recycling processes linked to the raw materials production.

- Module A2 – Transport: this module includes the transportation of raw materials from the production site to the ISCOM gate. The raw materials can be processed in ISCOM facility or directly in worksite of installation with transport of raw materials and machinaries. In this module, the internal transport of raw materials and machineries to worksite is included when necessary. In 2020 31% of products are accomplished in ISCOM facility, while the 69% of products are accomplished directly in worksite.

- Module A3 – Manufacturing: this module considers the ISCOM S.p.A. internal processes, including consumption of energy, resources and packaging. The production process consists in profiling the metal coil. The manufacturing process can take place in ISCOM facility or in worksite.
- Module A4 – Transport: this module considers the transport of product to construction site. If data were available the weighted average of distances was calculated (2020 data); in case of lack of specific data, a scenario has been designed for the transport of the product. When the raw materials are processed directly in worksite the transport is insignificant (considered 0 km).

PARAMETER	DESCRIPTION / VALUE
Fuel type and consumption of vehicle or vehicle type used for transport e.g. long distance truck, boat, etc	From Ecoinvent Truck (>32 ton): 0,0192 kg of diesel low sulfur for ton*km transported Ship: 0,0025 kg of heavy fuel oil for ton*km transported
Distance	Natural aluminium plate (0,7 mm thickness): - Truck: 226,27 km - Ship: 12,13 km Pre-painted aluminium plate (0,7 mm thickness) - Truck: 441,65 km Galvanized steel plate (0,5 mm thickness) - Truck: 0 Km Copper plate (0,8 mm thickness): - Truck: 319,32 km - Ship: 1721,70 km Stainless steel A2 plate (0,7 mm thickness) - Truck: 319,32 km - Ship: 1721,70 km Stainless steel A4 plate (0,7 mm thickness) - Truck: 319,32 km - Ship: 1721,70 km Steel Corten plate (0,8 mm thickness) - Truck: 319,32 km - Ship: 1721,70 km Titanium zinc plate (1,0 thickness) - Truck: 319,32 km - Ship: 1721,70 km
Capacity utilisation (including empty returns)	From Ecoinvent database: Truck: 48,36% Ship: 70%
Bulk density of transported products (kg/m3)	Natural aluminium plate (0,7 mm thickness): 3600 Pre-painted aluminium plate (0,7 mm thickness): 3600 Galvanized steel plate (0,5 mm thickness): 10460 Copper plate (0,8 mm thickness): 12012,5 Stainless steel A2 plate (0,7 mm thickness): 10771,43 Stainless steel A4 plate (0,7 mm thickness): 10771,43 Steel Corten plate (0,8 mm thickness): 10612,5 Titanium zinc plate (1,0 thickness): 9750
Volume capacity utilisation factor	1

- Module A5 – Construction installation: this module considers the installation of product in the building with use of auxiliary materials.

PARAMETER	DESCRIPTION	VALUE
Auxiliary materials for installation	Kg	0
Use of water	m^3	0
Use of other resources	Kg	0
Quantitative description of energy type and consumption during the preparation and installation process	Electric energy (kWh)	0,102
Direct emissions to ambient air, soil and water	kg	0
Waste materials on the building site, before waste processing, generated by the product's installation; specified by type	Wood (kg)	7,41E-02
	Metal strapping band (kg)	1,98E-03
	Steel band (kg)	5,77E-02
	Expanded polystyrene (kg)	1,87E-03
	Cardboard (kg)	1,43E-02
	LDPE film (kg)	3,75E-04
Output materials (specified by type) as result of waste processing at the building site e.g. of collection for recycling, for energy recovery, disposal; specified by route	Recover	Wood to reuse (7,41E-02 kg). Metal strapping band (1,98E-03 kg), Steel band (5,77E-02 kg), Expanded polystyrene (1,87E-03 kg) to recycling
	Landfill	Cardboard (1,43E-02 kg) and LDPE film (3,75E-02 kg) of locking system packaging

- Module B – Use stage: the product doesn't require any use, maintenance, repair, replacement, refurbishment and it isn't necessary use of energy or water for his use.

- Module C1 – Deconstruction/demolition: The product is uninstalled with the use of an electric screwdriver and a crane.

- Module C2 – Transport to waste processing: the product is then transported to disposal; the scenario provides the transport for 100 km.

- Module C3 - Waste processing for reuse, recovery and/or recycling: the product is send to recycling directly without any processing. The locking system is send to landfill. The copper and titanium zinc plate are send to landfill (scenario).

- Module C4 - Disposal: the product is totally disposed in landfill.

PARAMETER	VALUE / DESCRIPTION
Collection process specified by type	The product is uninstalled with the use of energy (0,102 kWh). Product waste collected with 16-32 metric ton truck
Recovery system specified by type	Natural aluminium: recycling Pre-painted aluminium: recycling Galvanized steel: recycling Stainless steel: recycling Steel Corten: recycling
Disposal specified by type	100 % Landfill for locking system 100% landfill for copper and titanium zinc plates
Assumptions for scenario development (e.g. transportation)	The product is uninstalled with the use of energy (0,102 kWh). Product waste collected with 16-32 metric ton truck

- Module D - Reuse-Recovery-Recycling potential: Module D calculates the potential environmental benefits of the recycling or reuse of materials. For the natural aluminium, prepainted aluminium, galvanized steel, stainless steel, steel Corten the benefits due to recycling or/and reuse are calculated.

Content information – Natural aluminium plate

The natural aluminium plate can be produced with 0,7 mm of thickness (2,52 kg/m^2), with 0,8 mm of thickness (2,93 kg/m^2), with 0,9 mm of thickness (3,31 kg/m^2), with 1,0 mm of thickness (3,68 kg/m^2). The weight of locking system is 0,18 kg/m^2 of product installed (for all products under study). In the results the natural aluminium plate with thickness of 0,7 mm has been represented, as the product most sold in the 2020 (between the natural aluminium plates). The variability within the all natural aluminium plates in terms of GWP is 33,6%.

Product components	Weight, %	Post-consumer material, weight-%	Renewable material, weight-%
Aluminium plate - 0,7 mm thickness	>90%	31% of pre-consumer recycled aluminium, 0% of post-consumer aluminium	0
Polyamide - locking system	<1%	0	0
Acetal resin - locking system	<6%	0	0
Screw – locking system	<1%	0	0
TOTAL kg	2,70		
Packaging materials	**Weight, kg**	**Weight-% (versus the product)**	
Wood	7,41E-02	2,74E+00	
Metal strapping band	1,98E-03	7,34E-02	
Steel band	5,77E-02	2,14E+00	
Expanded polystyrene	1,87E-03	6,92E-02	
Cardboard for locking system	1,43E-02	5,31E-01	
LDPE film for locking system	3,75E-04	1,39E-02	
TOTAL	1,50E-01	5,57E+00	

During the life cycle of the product any hazardous substance listed in the "Candidate List of Substances of Very High Concern (SVHC) for authorization" has not been used in a percentage higher than 0,1% of the weight of the product.

Environmental Information – Natural aluminium plate with 0,7 mm thickness (total weight 2,70 kg per m^2)

Potential environmental impact – mandatory indicators according to EN 15804

Results per declared unit															
Indicator	**Tot.A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-fossil (kg CO_2 eq.)	3,90E+01	5,91E-02	8,03E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,73E-02	4,65E-02	0,00E+00	9,58E-04	-1,77E+01
GWP-biogenic (kg CO_2 eq.)	-1,17E-01	4,26E-05	1,37E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,60E-04	1,80E-05	0,00E+00	1,90E-06	-2,24E-01
GWP-luluc (kg CO_2 eq)	1,25E-01	1,74E-05	1,61E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,60E-04	1,68E-05	0,00E+00	2,67E-07	-3,09E-01
GWP-total (kg CO_2 eq)	3,90E+01	5,91E-02	9,41E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,79E-02	4,66E-02	0,00E+00	9,60E-04	-1,82E+01
ODP (kg CFC 11 eq.)	1,72E-06	1,39E-08	3,71E-09	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,24E-09	1,02E-08	0,00E+00	3,95E-10	-1,87E-06
AP (mol H^+ eq.)	2,39E-01	2,57E-04	4,10E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,97E-04	2,38E-04	0,00E+00	9,10E-06	-1,13E-01
EP-freshwater (kg PO_4^{3-} eq.)	4,65E-03	1,38E-06	1,35E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,32E-05	1,33E-06	0,00E+00	3,30E-08	-2,78E-03
EP-freshwater (kg P eq)	1,52E-03	4,49E-07	4,40E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,30E-06	4,34E-07	0,00E+00	1,07E-08	-9,07E-04
EP-marine (kg N eq.)	3,68E-02	7,69E-05	8,75E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,57E-05	7,94E-05	0,00E+00	3,13E-06	-1,41E-02
EP-terrestrial (mol N eq.)	4,12E-01	8,50E-04	7,84E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,43E-04	8,76E-04	0,00E+00	3,45E-05	-1,54E-01
POCP (kg NMVOC eq.)	1,25E-01	2,72E-04	2,14E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,99E-04	2,49E-04	0,00E+00	1,00E-05	-5,29E-02
ADP-minerals&metals (kg Sb eq.) [1]	3,53E-03	1,00E-06	3,76E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,77E-07	1,23E-06	0,00E+00	8,77E-09	6,59E-03
ADP-fossil (MJ) [1]	4,12E+02	9,18E-01	1,03E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,97E-01	6,91E-01	0,00E+00	2,68E-02	-2,51E+02
WDP (m^3) [1]	9,55E+00	2,97E-03	1,25E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,22E-02	2,24E-03	0,00E+00	1,20E-03	-3,93E-01
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption														

[1] The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.

Potential environmental impact – additional mandatory and voluntary indicators

Results per declared unit															
Indicator	**Tot.A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-GHG[2] (kg CO_2 eq.)	3,77E+01	5,85E-02	8,70E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,57E-02	4,61E-02	0,00E+00	9,38E-04	-1,75E+01

1 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 equal to the GWP indicator originally defined in EN 15804:2012+A1:2013.

Information on biogenic carbon content

Results per declared unit		
BIOGENIC CARBON CONTENT	**Unit**	**QUANTITY**
Biogenic carbon content in product	kg C	0,00E+00
Biogenic carbon content in packaging	kg C	4,28E-02

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO_2.

Use of resources

Results per declared unit															
Indicator	**Tot.A1-A3**	**A4**	**A5**	**B1**	**B2**	**B2**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
PERE (MJ)	5,27E+01	1,15E-02	1,23E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,22E-01	7,72E-03	0,00E+00	2,17E-04	-8,63E+01
PERM (MJ)	1,61E+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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT (MJ)	5,43E+01	1,15E-02	1,23E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,22E-01	7,72E-03	0,00E+00	2,17E-04	-8,63E+01
PENRE (MJ)	4,12E+02	9,18E-01	1,03E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,97E-01	6,91E-01	0,00E+00	2,68E-02	-2,51E+02
PENRM (MJ)	2,67E+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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT (MJ)	4,14E+02	9,18E-01	1,03E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,97E-01	6,91E-01	0,00E+00	2,68E-02	-2,51E+02
SM (kg)	8,16E-01	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	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	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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW (m^3)	3,31E-01	2,07E-04	3,36E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,26E-04	1,31E-04	0,00E+00	2,98E-05	-1,29E-01
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water														

Waste production and output flows

Waste production

Results per declared unit														
Indicator	**Tot.A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Hazardous waste disposed (kg)	6,30E-03	2,22E-06	5,51E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,52E-07	1,82E-06	0,00E+00	4,00E-08	1,52E-03
Non-hazardous waste disposed (kg)	6,99E+00	7,95E-02	2,06E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,90E-03	3,26E-02	0,00E+00	1,82E-01	-4,73E+00
Radioactive waste disposed (kg)	8,98E-04	6,27E-06	3,33E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,12E-06	4,54E-06	0,00E+00	1,76E-07	-1,42E-03

Output flows

Results per declared unit															
Indicator	**Tot.A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Components for re-use (kg)	0,00E+00	0,00E+00	7,41E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Material for recycling (kg)	6,15E+01	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	2,52E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for energy recovery (kg)	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity (MJ)	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal (MJ)	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Content information – Pre-painted aluminium

The pre-painted aluminium plate can be produced with 0,7 mm of thickness (2,52 kg/m^2), with 0,8 mm of thickness (2,93 kg/m^2), with 0,9 mm of thickness (3,31 kg/m^2), with 1,0 mm of thickness (3,68 kg/m^2). The weight of paint is included. The weight of locking system is 0,18 kg/m^2 of product installed (for all products under study). In the results, the pre-painted aluminium plate with thickness of 0,7 mm has been represented, as the product most sold in the 2020 (between the pre-painted aluminium plates). The variability within the all pre-painted aluminium plates in terms of GWP is 31,1%.

Product components	Weight, %	Post-consumer material, weight-%	Renewable material, weight-%
Aluminium plate - 0,7 mm thickness	>90%	31% of pre-consumer recycled aluminium, 0% of post-consumer aluminium	0
PVDF - paint	<1%	0	0
Polyester resin - paint	<1%	0	0
Polyamide - locking system	<1%	0	0
Acetal resin - locking system	<6%	0	0
Screw – locking system	<1%	0	0
TOTAL kg	2,70		
Packaging materials	**Weight, kg**	**Weight-% (versus the product)**	
Wood	7,41E-02	2,74E-02	
Metal strapping band	1,98E-03	7,33E-04	
Steel band	5,77E-02	2,13E-02	
Expanded polystyrene	1,87E-03	6,92E-04	
Cardboard for locking system	1,43E-02	5,31E-01	
LDPE film for locking system	3,75E-04	1,39E-02	
TOTAL	1,50E-01	5,56E+00	

During the life cycle of the product any hazardous substance listed in the “Candidate List of Substances of Very High Concern (SVHC) for authorization” has not been used in a percentage higher than 0,1% of the weight of the product.

Environmental Information – Pre-painted aluminium plate with 0,7 mm thickness (total weight 2,70 kg per m^2)

Potential environmental impact – mandatory indicators according to EN 15804

Results per declared unit															
Indicator	**Tot.A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-fossil (kg CO_2 eq.)	3,36E+01	1,15E-01	8,03E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,73E-02	4,65E-02	0,00E+00	9,58E-04	-1,77E+01
GWP-biogenic (kg CO_2 eq.)	-1,02E-01	8,33E-05	1,37E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,60E-04	1,80E-05	0,00E+00	1,90E-06	-2,24E-01
GWP-luluc (kg CO_2 eq)	1,07E-01	3,35E-05	1,61E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,60E-04	1,68E-05	0,00E+00	2,67E-07	-3,09E-01
GWP-total (kg CO_2 eq)	3,36E+01	1,15E-01	9,41E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,79E-02	4,66E-02	0,00E+00	9,60E-04	-1,82E+01
ODP (kg CFC 11 eq.)	3,08E-05	2,70E-08	3,71E-09	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,24E-09	1,02E-08	0,00E+00	3,95E-10	-1,87E-06
AP (mol H^+ eq.)	1,93E-01	4,82E-04	4,10E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,97E-04	2,38E-04	0,00E+00	9,10E-06	-1,13E-01
EP-freshwater (kg PO_4^{3-} eq.)	3,89E-03	2,68E-06	1,35E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,32E-05	1,33E-06	0,00E+00	3,30E-08	-2,78E-03
EP-freshwater (kg P eq)	1,27E-03	8,75E-07	4,40E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,30E-06	4,34E-07	0,00E+00	1,07E-08	-9,07E-04
EP-marine (kg N eq.)	3,04E-02	1,45E-04	8,75E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,57E-05	7,94E-05	0,00E+00	3,13E-06	-1,41E-02
EP-terrestrial (mol N eq.)	3,40E-01	1,60E-03	7,84E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,43E-04	8,76E-04	0,00E+00	3,45E-05	-1,54E-01
POCP (kg NMVOC eq.)	1,04E-01	5,15E-04	2,14E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,99E-04	2,49E-04	0,00E+00	1,00E-05	-5,29E-02
ADP-minerals&metals (kg Sb eq.) [1]	5,18E-03	1,96E-06	3,76E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,77E-07	1,23E-06	0,00E+00	8,77E-09	6,59E-03
ADP-fossil (MJ) [1]	3,46E+02	1,78E+00	1,03E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,97E-01	6,91E-01	0,00E+00	2,68E-02	-2,51E+02
WDP (m^3) [1]	9,06E+00	5,79E-03	1,25E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,22E-02	2,24E-03	0,00E+00	1,20E-03	-3,93E-01
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption														

[1] The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.

Potential environmental impact – additional mandatory and voluntary indicators

Results per declared unit														
Indicator	**Tot.A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-GHG[2] (kg CO_2 eq.)	3,23E+01	1,14E-01	8,70E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,57E-02	4,61E-02	0,00E+00	9,38E-04	-1,75E+01

1 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 equal to the GWP indicator originally defined in EN 15804:2012+A1:2013.

Information on biogenic carbon content

Results per declared unit		
BIOGENIC CARBON CONTENT	**Unit**	**QUANTITY**
Biogenic carbon content in product	kg C	0,00E+00
Biogenic carbon content in packaging	kg C	4,28E-02

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO_2.

Use of resources

Results per declared unit															
Indicator	**Tot.A1-A3**	**A4**	**A5**	**B1**	**B2**	**B2**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
PERE (MJ)	4,34E+01	2,24E-02	1,23E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,22E-01	7,72E-03	0,00E+00	2,17E-04	-8,63E+01
PERM (MJ)	1,61E+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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT (MJ)	4,50E+01	2,24E-02	1,23E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,22E-01	7,72E-03	0,00E+00	2,17E-04	-8,63E+01
PENRE (MJ)	3,46E+02	1,78E+00	1,03E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,97E-01	6,91E-01	0,00E+00	2,68E-02	-2,51E+02
PENRM (MJ)	3,27E+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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT (MJ)	3,49E+02	1,78E+00	1,03E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,97E-01	6,91E-01	0,00E+00	2,68E-02	-2,51E+02
SM (kg)	8,16E-01	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	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	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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW (m^3)	3,02E-01	4,02E-04	3,36E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,26E-04	1,31E-04	0,00E+00	2,98E-05	-1,29E-01
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water														

Waste production and output flows

Waste production

Results per declared unit														
Indicator	**Tot.A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Hazardous waste disposed (kg)	6,42E-03	4,32E-06	5,51E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,52E-07	1,82E-06	0,00E+00	4,00E-08	1,52E-03
Non-hazardous waste disposed (kg)	5,64E+00	1,55E-01	2,06E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,90E-03	3,26E-02	0,00E+00	1,82E-01	-4,73E+00
Radioactive waste disposed (kg)	7,54E-04	1,22E-05	3,33E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,12E-06	4,54E-06	0,00E+00	1,76E-07	-1,42E-03

Output flows

Results per declared unit															
Indicator	**Tot.A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Components for re-use (kg)	0,00E+00	0,00E+00	7,41E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Material for recycling (kg)	6,15E+01	0,00E+00	6,15E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,23E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for energy recovery (kg)	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity (MJ)	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal (MJ)	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Content information – Galvanized steel plate

The galvanized steel plate can be produced with 0,5 mm of thickness (5,23 kg/m^2), with 0,6 mm of thickness (6,32 kg/m^2), with 0,7 mm of thickness (7,40 kg/m^2), with 0,8 mm of thickness (8,49 kg/m^2). The weight of paint is included. The weight of locking system is 0,18 kg/m^2 of product installed (for all products under study). In the results the galvanized steel plate with thickness of 0,5 mm has been represented, as the product with the biggest impact in terms of GWP. The variability within the all galvanized steel plates in terms of GWP is 47,2%.

Product components	Weight, %	Post-consumer material, weight-%	Renewable material, weight-%
Galvanized steel plate - 0,5 mm thickness	>95%	85% (from pre- and post-consumer origin of Italian scenario)	0
PVDF	<1%	0	0
Polyester resin	<1%	0	0
Polyamide locking system	<1%	0	0
Acetal resin locking system	<3%	0	0
Screw	<1%	0	0
TOTAL kg	5,41		
Packaging materials	**Weight, kg**	**Weight-% (versus the product)**	
Wood	7,41E-02	1,37E+00	
Metal strapping band	1,98E-03	3,66E-02	
Steel band	5,77E-02	1,07E+00	
Expanded polystyrene	1,87E-03	3,45E-02	
Cardboard for locking system	1,43E-02	2,65E-01	
LDPE film for locking system	3,75E-04	6,93E-03	
TOTAL	1,50E-01	2,78E+00	

During the life cycle of the product any hazardous substance listed in the “Candidate List of Substances of Very High Concern (SVHC) for authorization” has not been used in a percentage higher than 0,1% of the weight of the product.

Environmental Information – Galvanized steel plate with 0,5 mm thickness (total weight 5,41 kg per m^2)

Potential environmental impact – mandatory indicators according to EN 15804

Results per declared unit															
Indicator	**Tot.A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-fossil (kg CO_2 eq.)	2,12E+01	0,00E+00	8,03E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,73E-02	9,32E-02	0,00E+00	9,58E-04	-9,63E+00
GWP-biogenic (kg CO_2 eq.)	-5,50E-02	0,00E+00	1,37E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,60E-04	3,61E-05	0,00E+00	1,90E-06	9,07E-02
GWP-luluc (kg CO_2 eq)	1,88E-02	0,00E+00	1,61E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,60E-04	3,37E-05	0,00E+00	2,67E-07	-4,42E-04
GWP-total (kg CO_2 eq)	2,12E+01	0,00E+00	9,41E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,79E-02	9,32E-02	0,00E+00	9,60E-04	-9,54E+00
ODP (kg CFC 11 eq.)	7,14E-05	0,00E+00	3,71E-09	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,24E-09	2,04E-08	0,00E+00	3,95E-10	-5,03E-07
AP (mol H^+ eq.)	4,21E-01	0,00E+00	4,10E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,97E-04	4,77E-04	0,00E+00	9,10E-06	-3,20E-01
EP-freshwater (kg PO_4^{3-} eq.)	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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EP-freshwater (kg P eq)	1,01E-03	0,00E+00	4,40E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,30E-06	8,69E-07	0,00E+00	1,07E-08	-5,52E-04
EP-marine (kg N eq.)	2,81E-02	0,00E+00	8,75E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,57E-05	1,59E-04	0,00E+00	3,13E-06	-1,77E-02
EP-terrestrial (mol N eq.)	1,67E+00	0,00E+00	7,84E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,43E-04	1,75E-03	0,00E+00	3,45E-05	-1,32E+00
POCP (kg NMVOC eq.)	8,04E-02	0,00E+00	2,14E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,99E-04	4,99E-04	0,00E+00	1,00E-05	-5,05E-02
ADP-minerals&metals (kg Sb eq.) [1]	1,91E-02	0,00E+00	3,76E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,77E-07	2,47E-06	0,00E+00	8,77E-09	-1,56E-02
ADP-fossil (MJ) [1]	2,03E+02	0,00E+00	1,03E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,97E-01	1,38E+00	0,00E+00	2,68E-02	-9,11E+01
WDP (m^3) [1]	7,92E+00	0,00E+00	1,25E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,22E-02	4,48E-03	0,00E+00	1,20E-03	-2,87E+00
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption														

[1] The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.

Potential environmental impact – additional mandatory and voluntary indicators

Results per declared unit														
Indicator	**Tot.A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-GHG[2] (kg CO_2 eq.)	2,00E+01	0,00E+00	8,70E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,57E-02	9,23E-02	0,00E+00	9,38E-04	-9,12E+00

1 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 equal to the GWP indicator originally defined in EN 15804:2012+A1:2013.

Information on biogenic carbon content

Results per declared unit		
BIOGENIC CARBON CONTENT	**Unit**	**QUANTITY**
Biogenic carbon content in product	kg C	0,00E+00
Biogenic carbon content in packaging	kg C	4,28E-02

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO_2.

Use of resources

Results per declared unit															
Indicator	**Tot.A1-A3**	**A4**	**A5**	**B1**	**B2**	**B2**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
PERE (MJ)	2,06E+01	0,00E+00	1,23E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,22E-01	1,55E-02	0,00E+00	2,17E-04	-1,01E+01
PERM (MJ)	1,61E+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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT (MJ)	2,23E+01	0,00E+00	1,23E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,22E-01	1,55E-02	0,00E+00	2,17E-04	-1,01E+01
PENRE (MJ)	2,03E+02	0,00E+00	1,03E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,97E-01	1,38E+00	0,00E+00	2,68E-02	-9,11E+01
PENRM (MJ)	3,45E+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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT (MJ)	2,07E+02	0,00E+00	1,03E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,97E-01	1,38E+00	0,00E+00	2,68E-02	-9,11E+01
SM (kg)	4,48E+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	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	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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW (m^3)	2,83E-01	0,00E+00	3,36E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,26E-04	2,63E-04	0,00E+00	2,98E-05	-1,47E-01
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water														

Waste production and output flows

Waste production

Results per declared unit														
Indicator	**Tot.A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Hazardous waste disposed (kg)	3,32E-03	0,00E+00	5,51E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,52E-07	3,65E-06	0,00E+00	4,00E-08	-2,69E-03
Non-hazardous waste disposed (kg)	5,66E+00	0,00E+00	2,06E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,90E-03	6,53E-02	0,00E+00	1,82E-01	-3,74E+00
Radioactive waste disposed (kg)	4,14E-04	0,00E+00	3,33E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,12E-06	9,09E-06	0,00E+00	1,76E-07	-1,08E-04

Output flows

Results per declared unit															
Indicator	**Tot.A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Components for re-use (kg)	0,00E+00	0,00E+00	7,41E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Material for recycling (kg)	6,15E+01	0,00E+00	6,15E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for energy recovery (kg)	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity (MJ)	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal (MJ)	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Content information – Copper plate

The copper plate can be produced with 0,6 mm of thickness (7,15 kg/m^2), with 0,7 mm of thickness (8,38 kg/m^2), with 0,8 mm of thickness (9,61 kg/m^2). The weight of locking system is 0,18 kg/m^2 of product installed (for all products under study). In the results the copper plate with thickness of 0,8 mm has been represented, as the product with the biggest impact in terms of GWP. The variability within the all copper plates in terms of GWP is 24%.

Product components	Weight, %	Post-consumer material, weight-%	Renewable material, weight-%
Copper plate - 0,8 mm thickness	>97%	0	0
Polyamide - locking system	<1%	0	0
Acetal resin - locking system	<2%	0	0
Screw - locking system	<1%	0	0
TOTAL kg	9,79		
Packaging materials	**Weight, kg**	**Weight-% (versus the product)**	
Wood	7,41E-02	7,57E-01	
Metal strapping band	1,98E-03	2,02E-02	
Steel band	5,77E-02	5,89E-01	
Expanded polystyrene	1,87E-03	1,91E-02	
Cardboard for locking system	1,43E-02	1,47E-01	
LDPE film for locking system	3,75E-04	3,83E-03	
TOTAL	1,50E-01	1,54E+00	

During the life cycle of the product any hazardous substance listed in the "Candidate List of Substances of Very High Concern (SVHC) for authorization" has not been used in a percentage higher than 0,1% of the weight of the product.

Environmental Information – Copper plate with 0,8 mm thickness (total weight 9,79 kg per m^2)

Potential environmental impact – mandatory indicators according to EN 15804

Results per declared unit															
Indicator	**Tot.A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-fossil (kg CO_2 eq.)	4,02E+01	4,50E-01	8,03E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,73E-02	1,69E-01	0,00E+00	5,16E-02	0,00E+00
GWP-biogenic (kg CO_2 eq.)	1,25E+00	1,61E-04	1,37E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,60E-04	6,53E-05	0,00E+00	1,02E-04	0,00E+00
GWP-luluc (kg CO_2 eq)	4,26E-02	1,96E-04	1,61E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,60E-04	6,11E-05	0,00E+00	1,44E-05	0,00E+00
GWP-total (kg CO_2 eq)	4,15E+01	4,50E-01	9,41E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,79E-02	1,69E-01	0,00E+00	5,17E-02	0,00E+00
ODP (kg CFC 11 eq.)	3,41E-06	1,00E-07	3,71E-09	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,24E-09	3,69E-08	0,00E+00	2,12E-08	0,00E+00
AP (mol H^+ eq.)	1,97E+00	6,46E-03	4,10E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,97E-04	8,63E-04	0,00E+00	4,90E-04	0,00E+00
EP-freshwater (kg PO_4^{3-} eq.)	4,94E-02	8,79E-06	1,35E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,32E-05	4,83E-06	0,00E+00	1,77E-06	0,00E+00
EP-freshwater (kg P eq)	1,61E-02	2,86E-06	4,40E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,30E-06	1,57E-06	0,00E+00	5,78E-07	0,00E+00
EP-marine (kg N eq.)	1,33E-01	1,65E-03	8,75E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,57E-05	2,88E-04	0,00E+00	1,68E-04	0,00E+00
EP-terrestrial (mol N eq.)	1,97E+00	1,84E-02	7,84E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,43E-04	3,17E-03	0,00E+00	1,86E-03	0,00E+00
POCP (kg NMVOC eq.)	4,78E-01	5,01E-03	2,14E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,99E-04	9,03E-04	0,00E+00	5,39E-04	0,00E+00
ADP-minerals&metals (kg Sb eq.) [1]	1,90E-02	6,12E-06	3,76E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,77E-07	4,47E-06	0,00E+00	4,72E-07	0,00E+00
ADP-fossil (MJ) [1]	5,36E+02	6,55E+00	1,03E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,97E-01	2,50E+00	0,00E+00	1,44E+00	0,00E+00
WDP (m^3) [1]	2,95E+01	1,76E-02	1,25E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,22E-02	8,11E-03	0,00E+00	6,46E-02	0,00E+00
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption														

[1] The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.

Potential environmental impact – additional mandatory and voluntary indicators

Results per declared unit														
Indicator	**Tot.A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-GHG[2] (kg CO_2 eq.)	3,98E+01	4,46E-01	8,70E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,57E-02	1,67E-01	0,00E+00	5,05E-02	0,00E+00

1 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 equal to the GWP indicator originally defined in EN 15804:2012+A1:2013.

Information on biogenic carbon content

Results per declared unit		
BIOGENIC CARBON CONTENT	**Unit**	**QUANTITY**
Biogenic carbon content in product	kg C	0,00E+00
Biogenic carbon content in packaging	kg C	4,28E-02

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO_2.

Use of resources

Results per declared unit															
Indicator	**Tot.A1-A3**	**A4**	**A5**	**B1**	**B2**	**B2**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
PERE (MJ)	1,29E+02	7,04E-02	1,23E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,22E-01	2,80E-02	0,00E+00	1,17E-02	0,00E+00
PERM (MJ)	1,61E+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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT (MJ)	1,31E+02	7,04E-02	1,23E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,22E-01	2,80E-02	0,00E+00	1,17E-02	0,00E+00
PENRE (MJ)	5,36E+02	6,55E+00	1,03E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,97E-01	2,50E+00	0,00E+00	1,44E+00	0,00E+00
PENRM (MJ)	2,67E+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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT (MJ)	5,38E+02	6,55E+00	1,03E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,97E-01	2,50E+00	0,00E+00	1,44E+00	0,00E+00
SM (kg)	3,46E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	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	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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW (m^3)	1,15E+00	1,24E-03	3,36E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,26E-04	4,76E-04	0,00E+00	1,60E-03	0,00E+00
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water														

Waste production and output flows

Waste production

Results per declared unit														
Indicator	**Tot.A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Hazardous waste disposed (kg)	1,23E-03	1,28E-05	5,51E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,52E-07	6,60E-06	0,00E+00	2,15E-06	0,00E+00
Non-hazardous waste disposed (kg)	1,84E+01	3,95E-01	2,06E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,90E-03	1,18E-01	0,00E+00	9,79E+00	0,00E+00
Radioactive waste disposed (kg)	2,35E-03	4,50E-05	3,33E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,12E-06	1,65E-05	0,00E+00	9,47E-06	0,00E+00

Output flows

Results per declared unit															
Indicator	**Tot.A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Components for re-use (kg)	0,00E+00	0,00E+00	7,41E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Material for recycling (kg)	6,15E+01	0,00E+00	6,15E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,54E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for energy recovery (kg)	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity (MJ)	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal (MJ)	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Content information – Stainless steel A2 plate

The stainless steel A2 plate can be produced with 0,5 mm of thickness (5,32 kg/m^2), with 0,6 mm of thickness (6,43 kg/m^2), with 0,7 mm of thickness (7,54 kg/m^2). The weight of locking system is 0,18 kg/m^2 of product installed (for all products under study). In the results, the stainless steel A2 plate with thickness of 0,7 mm has been represented, as the product with the biggest impact in terms of GWP. The variability within the all stainless steel A2 plates in terms of GWP is 25,9%.

Product components	**Weight, %**	**Post-consumer material, weight-%**	**Renewable material, weight-%**
Stainless steel A2 plate – 0,7 mm thickness	>97%	85% (from pre- and post-consumer origin of Italian scenario)	0
Polyamide - locking system	<1%	0	0
Acetal resin - locking system	<3%	0	0
Screw – locking system	<1%	0	0
TOTAL kg	7,72		
Packaging materials	**Weight, kg**	**Weight-% (versus the product)**	
Wood	7,41E-02	9,60E-01	
Metal strapping band	1,98E-03	2,56E-02	
Steel band	5,77E-02	7,47E-01	
Expanded polystyrene	1,87E-03	2,42E-02	
Cardboard for locking system	1,43E-02	1,86E-01	
LDPE film for locking system	3,75E-04	4,86E-03	
TOTAL	1,50E-01	1,95E+00	

During the life cycle of the product any hazardous substance listed in the “Candidate List of Substances of Very High Concern (SVHC) for authorization” has not been used in a percentage higher than 0,1% of the weight of the product.

Environmental Information – Stainless steel A2 plate with 0,7 mm thickness (total weight 7,72 kg per m^2)

Potential environmental impact – mandatory indicators according to EN 15804

Results per declared unit															
Indicator	**Tot.A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-fossil (kg CO_2 eq.)	1,99E+01	3,56E-01	8,03E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,73E-02	1,33E-01	0,00E+00	9,58E-04	-7,15E+00
GWP-biogenic (kg CO_2 eq.)	1,15E-01	1,27E-04	1,37E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,60E-04	5,15E-05	0,00E+00	1,90E-06	1,40E-01
GWP-luluc (kg CO_2 eq)	1,88E-02	1,55E-04	1,61E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,60E-04	4,81E-05	0,00E+00	2,67E-07	7,69E-04
GWP-total (kg CO_2 eq)	2,00E+01	3,57E-01	9,41E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,79E-02	1,33E-01	0,00E+00	9,60E-04	-7,01E+00
ODP (kg CFC 11 eq.)	1,33E-06	7,94E-08	3,71E-09	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,24E-09	2,91E-08	0,00E+00	3,95E-10	-1,61E-07
AP (mol H^+ eq.)	1,27E-01	5,11E-03	4,10E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,97E-04	6,80E-04	0,00E+00	9,10E-06	-2,62E-02
EP-freshwater (kg PO_4^{3-} eq.)	3,00E-03	6,96E-06	1,35E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,32E-05	3,81E-06	0,00E+00	3,30E-08	-8,33E-04
EP-freshwater (kg P eq)	9,77E-04	2,27E-06	4,40E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,30E-06	1,24E-06	0,00E+00	1,07E-08	-2,71E-04
EP-marine (kg N eq.)	2,26E-02	1,31E-03	8,75E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,57E-05	2,27E-04	0,00E+00	3,13E-06	-5,29E-03
EP-terrestrial (mol N eq.)	2,61E-01	1,45E-02	7,84E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,43E-04	2,50E-03	0,00E+00	3,45E-05	-5,59E-02
POCP (kg NMVOC eq.)	7,96E-02	3,97E-03	2,14E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,99E-04	7,12E-04	0,00E+00	1,00E-05	-3,83E-02
ADP-minerals&metals (kg Sb eq.) [1]	8,11E-04	4,85E-06	3,76E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,77E-07	3,52E-06	0,00E+00	8,77E-09	-1,33E-05
ADP-fossil (MJ) [1]	2,61E+02	5,19E+00	1,03E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,97E-01	1,97E+00	0,00E+00	2,68E-02	-4,78E+01
WDP (m^3) [1]	9,80E+00	1,39E-02	1,25E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,22E-02	6,39E-03	0,00E+00	1,20E-03	3,26E-01
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption														

[1] The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.

Potential environmental impact – additional mandatory and voluntary indicators

Results per declared unit														
Indicator	**Tot.A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-GHG[2] (kg CO_2 eq.)	1,94E+01	3,53E-01	8,70E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,57E-02	1,32E-01	0,00E+00	9,38E-04	-6,65E+00

1 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 equal to the GWP indicator originally defined in EN 15804:2012+A1:2013.

Information on biogenic carbon content

Results per declared unit		
BIOGENIC CARBON CONTENT	**Unit**	**QUANTITY**
Biogenic carbon content in product	kg C	0,00E+00
Biogenic carbon content in packaging	kg C	4,28E-02

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO_2.

Use of resources

Results per declared unit															
Indicator	**Tot.A1-A3**	**A4**	**A5**	**B1**	**B2**	**B2**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
PERE (MJ)	5,66E+01	5,57E-02	1,23E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,22E-01	2,21E-02	0,00E+00	2,17E-04	7,68E-01
PERM (MJ)	1,61E+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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT (MJ)	5,82E+01	5,57E-02	1,23E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,22E-01	2,21E-02	0,00E+00	2,17E-04	7,68E-01
PENRE (MJ)	2,61E+02	5,19E+00	1,03E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,97E-01	1,97E+00	0,00E+00	2,68E-02	-4,78E+01
PENRM (MJ)	2,67E+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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT (MJ)	2,64E+02	5,19E+00	1,03E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,97E-01	1,97E+00	0,00E+00	2,68E-02	-4,78E+01
SM (kg)	6,44E+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	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	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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW (m^3)	1,88E-01	9,84E-04	3,36E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,26E-04	3,75E-04	0,00E+00	2,98E-05	-3,67E-02
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water														

Waste production and output flows

Waste production

Results per declared unit														
Indicator	**Tot.A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Hazardous waste disposed (kg)	3,44E-04	1,01E-05	5,51E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,52E-07	5,21E-06	0,00E+00	4,00E-08	-7,91E-04
Non-hazardous waste disposed (kg)	1,85E+01	3,13E-01	2,06E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,90E-03	9,32E-02	0,00E+00	1,82E-01	-3,92E-01
Radioactive waste disposed (kg)	9,07E-04	3,56E-05	3,33E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,12E-06	1,30E-05	0,00E+00	1,76E-07	8,21E-05

Output flows

Results per declared unit															
Indicator	**Tot.A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Components for re-use (kg)	0,00E+00	0,00E+00	7,41E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Material for recycling (kg)	6,15E+01	0,00E+00	6,15E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,54E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for energy recovery (kg)	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity (MJ)	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal (MJ)	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Content information – Stainless steel A4 plate

The stainless steel A4 plate can be produced with 0,5 mm of thickness (5,32 kg/m^2), with 0,6 mm of thickness (6,43 kg/m^2), with 0,7 mm of thickness (7,54 kg/m^2). The weight of locking system is 0,18 kg/m^2 of product installed (for all products under study). In the results the stainless steel A4 plate with thickness of 0,7 mm has been represented, as the product with the biggest impact in terms of GWP. The variability within the all stainless steel A4 plates in terms of GWP is 27,1%.

Product components	Weight, %	Post-consumer material, weight-%	Renewable material, weight-%
Stainless steel A4 plate – 0,7 mm thickness	>97%	85% (from pre- and post-consumer origin of Italian scenario)	0
Polyamide - locking system	<1%	0	0
Acetal resin - locking system	<3%	0	0
Screw – locking system	<1%	0	0
TOTAL kg	7,72		
Packaging materials	**Weight, kg**	**Weight-% (versus the product)**	
Wood	7,41E-02	9,60E-01	
Metal strapping band	1,98E-03	2,56E-02	
Steel band	5,77E-02	7,47E-01	
Expanded polystyrene	1,87E-03	2,42E-02	
Cardboard for locking system	1,43E-02	1,86E-01	
LDPE film for locking system	3,75E-04	4,86E-03	
TOTAL	1,50E-01	1,95E+00	

During the life cycle of the product any hazardous substance listed in the “Candidate List of Substances of Very High Concern (SVHC) for authorization” has not been used in a percentage higher than 0,1% of the weight of the product.

Environmental Information – Stainless steel A4 plate with 0,7 mm thickness (total weight 7,72 kg per m^2)

Potential environmental impact – mandatory indicators according to EN 15804

Results per declared unit															
Indicator	**Tot.A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-fossil (kg CO_2 eq.)	3,17E+01	3,56E-01	8,03E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,73E-02	1,33E-01	0,00E+00	9,58E-04	-6,91E+00
GWP-biogenic (kg CO_2 eq.)	-2,38E-02	1,27E-04	1,37E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,60E-04	5,15E-05	0,00E+00	1,90E-06	1,39E-01
GWP-luluc (kg CO_2 eq)	3,90E-02	1,55E-04	1,61E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,60E-04	4,81E-05	0,00E+00	2,67E-07	8,12E-04
GWP-total (kg CO_2 eq)	3,18E+01	3,57E-01	9,41E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,79E-02	1,33E-01	0,00E+00	9,60E-04	-6,77E+00
ODP (kg CFC 11 eq.)	2,01E-06	7,94E-08	3,71E-09	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,24E-09	2,91E-08	0,00E+00	3,95E-10	-1,51E-07
AP (mol H^+ eq.)	4,57E-01	5,11E-03	4,10E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,97E-04	6,80E-04	0,00E+00	9,10E-06	-2,52E-02
EP-freshwater (kg PO_4^{3-} eq.)	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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EP-freshwater (kg P eq)	2,00E-02	2,27E-06	4,40E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,30E-06	1,24E-06	0,00E+00	1,07E-08	-2,60E-04
EP-marine (kg N eq.)	1,15E-01	1,31E-03	8,75E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,57E-05	2,27E-04	0,00E+00	3,13E-06	-5,09E-03
EP-terrestrial (mol N eq.)	1,71E+00	1,45E-02	7,84E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,43E-04	2,50E-03	0,00E+00	3,45E-05	-5,37E-02
POCP (kg NMVOC eq.)	3,49E-01	3,97E-03	2,14E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,99E-04	7,12E-04	0,00E+00	1,00E-05	-3,70E-02
ADP-minerals&metals (kg Sb eq.) [1]	7,52E-03	4,85E-06	3,76E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,77E-07	3,52E-06	0,00E+00	8,77E-09	-1,30E-05
ADP-fossil (MJ) [1]	3,86E+02	5,19E+00	1,03E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,97E-01	1,97E+00	0,00E+00	2,68E-02	-4,55E+01
WDP (m^3) [1]	2,47E+01	1,39E-02	1,25E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,22E-02	6,39E-03	0,00E+00	1,20E-03	3,22E-01
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption														

[1] The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.

Potential environmental impact – additional mandatory and voluntary indicators

Results per declared unit														
Indicator	**Tot.A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-GHG[2] (kg CO_2 eq.)	3,08E+01	3,53E-01	8,70E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,57E-02	1,32E-01	0,00E+00	9,38E-04	-6,43E+00

1 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 equal to the GWP indicator originally defined in EN 15804:2012+A1:2013.

Information on biogenic carbon content

Results per declared unit		
BIOGENIC CARBON CONTENT	**Unit**	**QUANTITY**
Biogenic carbon content in product	kg C	0,00E+00
Biogenic carbon content in packaging	kg C	4,28E-02

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO_2.

Use of resources

Results per declared unit															
Indicator	**Tot.A1-A3**	**A4**	**A5**	**B1**	**B2**	**B2**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
PERE (MJ)	1,05E+02	5,57E-02	1,23E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,22E-01	2,21E-02	0,00E+00	2,17E-04	8,07E-01
PERM (MJ)	1,61E+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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT (MJ)	1,07E+02	5,57E-02	1,23E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,22E-01	2,21E-02	0,00E+00	2,17E-04	8,07E-01
PENRE (MJ)	3,86E+02	5,19E+00	1,03E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,97E-01	1,97E+00	0,00E+00	2,68E-02	-4,55E+01
PENRM (MJ)	1,44E+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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT (MJ)	3,87E+02	5,19E+00	1,03E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,97E-01	1,97E+00	0,00E+00	2,68E-02	-4,55E+01
SM (kg)	6,44E+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	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	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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW (m^3)	8,90E-01	9,84E-04	3,36E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,26E-04	3,75E-04	0,00E+00	2,98E-05	-3,55E-02
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water														

Waste production and output flows

Waste production

Results per declared unit														
Indicator	**Tot.A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Hazardous waste disposed (kg)	5,77E-04	1,01E-05	5,51E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,52E-07	5,21E-06	0,00E+00	4,00E-08	-7,66E-04
Non-hazardous waste disposed (kg)	2,28E+01	3,13E-01	2,06E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,90E-03	9,32E-02	0,00E+00	1,82E-01	-3,74E-01
Radioactive waste disposed (kg)	1,25E-03	3,56E-05	3,33E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,12E-06	1,30E-05	0,00E+00	1,76E-07	8,44E-05

Output flows

Results per declared unit															
Indicator	**Tot.A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Components for re-use (kg)	0,00E+00	0,00E+00	7,41E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Material for recycling (kg)	6,15E+01	0,00E+00	6,15E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,49E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for energy recovery (kg)	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity (MJ)	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal (MJ)	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Content information – Steel Corten plate

The steel Corten plate can be produced with 0,6 mm of thickness (6,32 kg/m^2) and with 0,8 mm of thickness (8,49 kg/m^2). The weight of locking system is 0,18 kg/m^2 of product installed (for all products under study). In the results the steel Corten plate with thickness of 0,8 mm has been represented, as the product with the biggest impact in terms of GWP. The variability within the all steel Corten plates in terms of GWP is 19,4%.

Product components	Weight, %	Post-consumer material, weight-%	Renewable material, weight-%
Steel Corten plate – 0,8 mm thickness	>97%	85% (from pre- and post-consumer origin of Italian scenario)	0
Polyamide - locking system	<1%	0	0
Acetal resin - locking system	<2%	0	0
Screw – locking system	<1%	0	0
TOTAL kg	8,67		
Packaging materials	**Weight, kg**	**Weight-% (versus the product)**	
Wood	7,41E-02	8,54E-01	
Metal strapping band	1,98E-03	2,28E-02	
Steel band	5,77E-02	6,65E-01	
Expanded polystyrene	1,87E-03	2,16E-02	
Cardboard for locking system	1,43E-02	1,65E-01	
LDPE film for locking system	3,75E-04	4,33E-03	
TOTAL	1,50E-01	1,73E+00	

During the life cycle of the product any hazardous substance listed in the “Candidate List of Substances of Very High Concern (SVHC) for authorization” has not been used in a percentage higher than 0,1% of the weight of the product.

Environmental Information – Steel Corten plate with 0,8 mm thickness (total weight 8,67 kg per m^2)

Potential environmental impact – mandatory indicators according to EN 15804

Results per declared unit															
Indicator	**Tot.A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-fossil (kg CO_2 eq.)	1,06E+01	3,99E-01	8,03E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,73E-02	1,49E-01	0,00E+00	9,58E-04	-1,23E+01
GWP-biogenic (kg CO_2 eq.)	-2,15E-02	1,43E-04	1,37E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,60E-04	5,78E-05	0,00E+00	1,90E-06	1,39E-01
GWP-luluc (kg CO_2 eq)	9,68E-03	1,74E-04	1,61E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,60E-04	5,41E-05	0,00E+00	2,67E-07	4,89E-03
GWP-total (kg CO_2 eq)	1,06E+01	4,00E-01	9,41E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,79E-02	1,49E-01	0,00E+00	9,60E-04	-1,22E+01
ODP (kg CFC 11 eq.)	9,08E-07	8,89E-08	3,71E-09	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,24E-09	3,26E-08	0,00E+00	3,95E-10	-3,89E-07
AP (mol H^+ eq.)	5,08E-02	5,73E-03	4,10E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,97E-04	7,64E-04	0,00E+00	9,10E-06	-6,22E-02
EP-freshwater (kg PO_4^{3-} eq.)	1,85E-03	7,80E-06	1,35E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,32E-05	4,28E-06	0,00E+00	3,30E-08	-2,19E-03
EP-freshwater (kg P eq)	6,04E-04	2,54E-06	4,40E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,30E-06	1,39E-06	0,00E+00	1,07E-08	-7,14E-04
EP-marine (kg N eq.)	9,87E-03	1,47E-03	8,75E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,57E-05	2,55E-04	0,00E+00	3,13E-06	-1,16E-02
EP-terrestrial (mol N eq.)	1,13E-01	1,63E-02	7,84E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,43E-04	2,81E-03	0,00E+00	3,45E-05	-1,41E-01
POCP (kg NMVOC eq.)	4,24E-02	4,45E-03	2,14E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,99E-04	8,00E-04	0,00E+00	1,00E-05	-6,85E-02
ADP-minerals&metals (kg Sb eq.) [1]	1,27E-04	5,43E-06	3,76E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,77E-07	3,96E-06	0,00E+00	8,77E-09	-2,54E-04
ADP-fossil (MJ) [1]	1,56E+02	5,81E+00	1,03E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,97E-01	2,22E+00	0,00E+00	2,68E-02	-9,90E+01
WDP (m^3) [1]	9,14E+00	1,56E-02	1,25E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,22E-02	7,18E-03	0,00E+00	1,20E-03	-2,62E+00
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption														

[1] The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.

Potential environmental impact – additional mandatory and voluntary indicators

Results per declared unit														
Indicator	**Tot.A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-GHG[2] (kg CO_2 eq.)	1,03E+01	3,96E-01	8,70E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,57E-02	1,48E-01	0,00E+00	9,38E-04	-1,16E+01

1 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 equal to the GWP indicator originally defined in EN 15804:2012+A1:2013.

Information on biogenic carbon content

Results per declared unit		
BIOGENIC CARBON CONTENT	**Unit**	**QUANTITY**
Biogenic carbon content in product	kg C	0,00E+00
Biogenic carbon content in packaging	kg C	4,28E-02

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO_2.

Use of resources

Results per declared unit															
Indicator	**Tot.A1-A3**	**A4**	**A5**	**B1**	**B2**	**B2**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
PERE (MJ)	1,68E+01	6,25E-02	1,23E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,22E-01	2,48E-02	0,00E+00	2,17E-04	-1,18E+01
PERM (MJ)	1,61E+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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT (MJ)	1,84E+01	6,25E-02	1,23E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,22E-01	2,48E-02	0,00E+00	2,17E-04	-1,18E+01
PENRE (MJ)	1,56E+02	5,81E+00	1,03E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,97E-01	2,22E+00	0,00E+00	2,68E-02	-9,90E+01
PENRM (MJ)	2,67E+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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT (MJ)	1,59E+02	5,81E+00	1,03E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,97E-01	2,22E+00	0,00E+00	2,68E-02	-9,90E+01
SM (kg)	7,25E+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	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	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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW (m^3)	1,64E-01	1,10E-03	3,36E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,26E-04	4,21E-04	0,00E+00	2,98E-05	-9,04E-02
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water														

Waste production and output flows

Waste production

Results per declared unit														
Indicator	**Tot.A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Hazardous waste disposed (kg)	3,78E-04	1,13E-05	5,51E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,52E-07	5,85E-06	0,00E+00	4,00E-08	-1,13E-03
Non-hazardous waste disposed (kg)	3,27E+00	3,51E-01	2,06E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,90E-03	1,05E-01	0,00E+00	1,82E-01	-5,74E+00
Radioactive waste disposed (kg)	5,57E-04	3,99E-05	3,33E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,12E-06	1,46E-05	0,00E+00	1,76E-07	-3,62E-05

Output flows

Results per declared unit															
Indicator	**Tot.A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Components for re-use (kg)	0,00E+00	0,00E+00	7,41E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Material for recycling (kg)	6,15E+01	0,00E+00	6,15E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,49E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for energy recovery (kg)	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity (MJ)	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal (MJ)	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Content information – Titanium zinc plate

The titanium zinc plate can be produced with 0,8 mm of thickness (7,76 kg/m^2) and with 1,0 mm of thickness (9,75 kg/m^2). The weight of locking system is 0,18 kg/m^2 of product installed (for all products under study). In the results the titanium zinc plate with thickness of 1,0 mm has been represented, as the product with the biggest impact in terms of GWP. The variability within the all titanium zinc plates in terms of GWP is 19,2%.

Product components	Weight, %	Post-consumer material, weight-%	Renewable material, weight-%
Titanium zinc plate - 1,0 mm thickness	>97	0	0
Polyamide - locking system	<1%	0	0
Acetal resin - locking system	<2%	0	0
Screw - locking system	<1%	0	0
TOTAL kg	9,93		
Packaging materials	**Weight, kg**	**Weight-% (versus the product)**	
Wood	7,41E-02	7,46E-01	
Metal strapping band	1,98E-03	1,99E-02	
Steel band	5,77E-02	5,81E-01	
Expanded polystyrene	1,87E-03	1,88E-02	
Cardboard for locking system	1,43E-02	1,44E-01	
LDPE film for locking system	3,75E-04	3,78E-03	
TOTAL	1,50E-01	1,51E+00	

During the life cycle of the product any hazardous substance listed in the "Candidate List of Substances of Very High Concern (SVHC) for authorization" has not been used in a percentage higher than 0,1% of the weight of the product.

Environmental Information – Titanium zinc plate with 1,0 mm thickness (total weight 9,93 kg per m^2)

Potential environmental impact – mandatory indicators according to EN 15804

Results per declared unit															
Indicator	**Tot.A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-fossil (kg CO_2 eq.)	4,23E+01	4,56E-01	8,03E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,73E-02	1,71E-01	0,00E+00	5,23E-02	0,00E+00
GWP-biogenic (kg CO_2 eq.)	1,57E+00	1,63E-04	1,37E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,60E-04	6,63E-05	0,00E+00	1,04E-04	0,00E+00
GWP-luluc (kg CO_2 eq)	1,23E-01	1,98E-04	1,61E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,60E-04	6,19E-05	0,00E+00	1,46E-05	0,00E+00
GWP-total (kg CO_2 eq)	4,40E+01	4,57E-01	9,41E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,79E-02	1,71E-01	0,00E+00	5,24E-02	0,00E+00
ODP (kg CFC 11 eq.)	3,51E-06	1,02E-07	3,71E-09	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,24E-09	3,74E-08	0,00E+00	2,15E-08	0,00E+00
AP (mol H^+ eq.)	3,97E-01	6,55E-03	4,10E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,97E-04	8,75E-04	0,00E+00	4,97E-04	0,00E+00
EP-freshwater (kg PO_4^{3-} eq.)	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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EP-freshwater (kg P eq)	4,41E-03	2,90E-06	4,40E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,30E-06	1,60E-06	0,00E+00	5,86E-07	0,00E+00
EP-marine (kg N eq.)	7,81E-02	1,68E-03	8,75E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,57E-05	2,92E-04	0,00E+00	1,71E-04	0,00E+00
EP-terrestrial (mol N eq.)	8,89E-01	1,86E-02	7,84E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,43E-04	3,22E-03	0,00E+00	1,88E-03	0,00E+00
POCP (kg NMVOC eq.)	2,28E-01	5,08E-03	2,14E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,99E-04	9,16E-04	0,00E+00	5,47E-04	0,00E+00
ADP-minerals&metals (kg Sb eq.) [1]	8,01E-01	6,21E-06	3,76E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,77E-07	4,53E-06	0,00E+00	4,79E-07	0,00E+00
ADP-fossil (MJ) [1]	6,30E+02	6,64E+00	1,03E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,97E-01	2,54E+00	0,00E+00	1,46E+00	0,00E+00
WDP (m^3) [1]	4,30E+01	1,78E-02	1,25E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,22E-02	8,22E-03	0,00E+00	6,55E-02	0,00E+00
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption														

[1] The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.

Potential environmental impact – additional mandatory and voluntary indicators

Results per declared unit														
Indicator	**Tot.A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-GHG[2] (kg CO_2 eq.)	4,20E+01	4,52E-01	8,70E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,57E-02	1,69E-01	0,00E+00	5,12E-02	0,00E+00

1 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 equal to the GWP indicator originally defined in EN 15804:2012+A1:2013.

Information on biogenic carbon content

Results per declared unit		
BIOGENIC CARBON CONTENT	**Unit**	**QUANTITY**
Biogenic carbon content in product	kg C	0,00E+00
Biogenic carbon content in packaging	kg C	4,28E-02

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO_2.

Use of resources

Results per declared unit															
Indicator	**Tot.A1-A3**	**A4**	**A5**	**B1**	**B2**	**B2**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
PERE (MJ)	7,87E+01	7,14E-02	1,23E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,22E-01	2,84E-02	0,00E+00	1,18E-02	0,00E+00
PERM (MJ)	1,61E+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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT (MJ)	8,03E+01	7,14E-02	1,23E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,22E-01	2,84E-02	0,00E+00	1,18E-02	0,00E+00
PENRE (MJ)	6,30E+02	6,64E+00	1,03E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,97E-01	2,54E+00	0,00E+00	1,46E+00	0,00E+00
PENRM (MJ)	2,67E+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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT (MJ)	6,33E+02	6,64E+00	1,03E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,97E-01	2,54E+00	0,00E+00	1,46E+00	0,00E+00
SM (kg)	3,46E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	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	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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW (m^3)	3,88E+00	1,26E-03	3,36E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,26E-04	4,82E-04	0,00E+00	1,62E-03	0,00E+00
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water														

Waste production and output flows

Waste production

Results per declared unit														
Indicator	**Tot.A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Hazardous waste disposed (kg)	1,02E-01	1,29E-05	5,51E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,52E-07	6,69E-06	0,00E+00	2,18E-06	0,00E+00
Non-hazardous waste disposed (kg)	7,11E+00	4,01E-01	2,06E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,90E-03	1,20E-01	0,00E+00	9,93E+00	0,00E+00
Radioactive waste disposed (kg)	2,98E-03	4,56E-05	3,33E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,12E-06	1,67E-05	0,00E+00	9,60E-06	0,00E+00

Output flows

Results per declared unit															
Indicator	**Tot.A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Components for re-use (kg)	0,00E+00	0,00E+00	7,41E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Material for recycling (kg)	6,15E+01	0,00E+00	6,15E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for energy recovery (kg)	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity (MJ)	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal (MJ)	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Additional information

No further information is provided.

This document is the first emission of EPD.

References

- General Programme Instructions of the International EPD® System. Version 4.0.
- PCR 2019:14. CONSTRUCTION PRODUCTS. Version 1.11
- ISO 14040:2006 Environmental management-Life Cycle Assessment - Principles and framework
- ISO 14044:2006 Environmental management-Life Cycle Assessment-Requirements and guidelines
- ISO 14025:2010 Environmental labels and declarations-Type III Environmental Declarations-Principles and procedures
- EN 15804:2012+A2:2019, Sustainability of construction works — Environmental product declarations
- Project report rev.2 of 21/01/2022 – Life cycle assessment: RIVERCLACK® 550

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