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Environmental Product Declaration

Average EPD

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

Windows, doors and sliding systems manufactured from Salamander profile systems

HESTA, spol. s r.o.

Programme
EPD Square | www.epdsquare.com

Programme operator
EPD Square, s.r.o.

EPD Registration number
SQ 00-066

Publication date
14.07.2026

Valid until
13.07.2031

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General information

Product
Windows, doors and sliding systems manufactured from Salamander profile systems

Program operator
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Registration number
SQ 00-066

Publication date
14.07.2026

Valid until date
13.07.2031

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Place of production
Jilemnického 8770/3D
080 01 Prešov
Slovak Republic

Product Category Rules (PCR)
EPD Square PCR v1.0.1, 2025, EN 15804:2012+A2:2019/AC:2021, EN 17213:2020

Declared/Functional unit
1 m^2

Mass per DU
50 kg

UN CPC code
3695 Builders' ware of plastics n.e.c.

Geographical scope
Global

Year of study
2025

Comparability
EPDs of construction products may not be comparable if they do not comply with EN 15804 and if they are not compared in the context of the building.

EPD author
Ludmila Vaculova Meciarova, Silvia Vilcekova
EPD Clarity

Verification type
Independent verification of the declaration and data, according to ISO14025:2006
Internal: ☐
External: ☑

Verified by
Yazan Badour

The owner of the declaration shall be liable for the underlying information and evidence.
EPD Square shall not be liable with respect to manufacturer, life cycle assessment data and evidence.

System boundaries

This average EPD is based on system boundary cradle-to-gate with options, modules C1-C4, module D and optional modules A4, A5 according to EN 15804:2012+A2:2019/AC:2021. The Reference Service Life (RSL) of the product is 20 years according to manufacturer data.

Modules declared and geographical scope

	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	MND	MND	MND	MND	MND	MND	MND	x	x	x	x	x
Geographic scope	EU	EU	EU	GLO	GLO	-	-	-	-	-	-	-	GLO	GLO	GLO	GLO	GLO

MND = Modules not declared.

Description of organization

HESTA, spol. s.r.o. was founded in 1993 and is one of the longest-standing manufacturers of windows and doors in Slovakia.

Since the company's founding, its primary goals have been product quality and maximum customer satisfaction. Investments in new production technologies and software have established HESTA as one of the leading manufacturers of windows and doors in Slovakia. In terms of production volume and capacity, HESTA ranks second among manufacturers in the Slovak market.

10 Reasons to choose HESTA:

SLOVAK MANUFACTURER
We source profiles and components from the highest-quality suppliers in Slovakia and use them to manufacture products of the highest quality.

QUALITY OF CUSTOMER SERVICE
Prompt responses, a high level of responsiveness, and the swift handling of customer requests are the hallmarks of our customer service.

Solutions with a green heart
Thanks to lower energy consumption in our manufacturing process, we help reduce CO_2 emissions. We manufacture plastic windows from partially recycled materials, and they are 100% recyclable.

Premium quality
The quality of our products is guaranteed by top-of-the-line profile systems, components, and ongoing investments in production modernization. This quality is further confirmed by ISO 9001 certification from the German TÜV.

Availability
We have more than 150 sales offices in Slovakia and the Czech Republic, and we export our products to several European countries. We have satisfied customers in Germany, the Czech Republic, Austria, Belgium, Switzerland, and Italy.

Perfection in the details
Premium features included in the base price of the products, such as micro-ventilation, anti-mishandling locks, security points on the hardware, handles, and more.

Warranty
A 5-year product warranty, plus flexible post-warranty service provided directly at the customer's location.

Tradition and Experience
HESTA is one of Slovakia's largest manufacturers of plastic and aluminium windows and doors, with a history spanning more than 20 years.

CUSTOMER SATISFACTION COMES FIRST
We place the utmost emphasis on being accommodating and meeting our customers' needs. This is a top priority for our customer service center.

Credibility
Since 2012, HESTA has held a Top Rating from the global rating agency Dun & Bradstreet at the highest possible level of "1".

The company has a certified integrated quality management system in accordance with ISO 9001, an environmental management system in accordance with ISO 14001, and an occupational health and safety management system in accordance with ISO 45001, all certified by TÜV SÜD Slovakia s.r.o.

Product information

Product name

Windows, doors and sliding systems manufactured from Salamander profile systems

Product description

SALAMANDER entrance doors, balcony doors, sliding doors, and folding doors are manufactured from highly durable plastic profiles, ensuring the required level of security. They can be complemented with accessories available in a wide range of colours, types, and shapes. In addition to excellent thermal insulation and structural performance, modern plastic doors offer further advantages, such as ease of maintenance and repair, versatility, and access to professional service. A significant advantage for creative and modern design is the possibility of manufacturing doors in non-standard dimensions. Furthermore, the maintenance requirements for plastic doors are significantly lower compared to other materials. High-quality plastic profiles offer a long service life and are not limited to use in conventional door applications.

Plastic windows manufactured from high-quality German SALAMANDER profiles are widely used due to their ease of maintenance, long service life, functionality, and excellent thermal and structural properties. Additional benefits include ease of repair, versatility, and availability of professional service. Plastic windows are produced in modern designs, with a wide selection of colours and finishes. Non-standard dimensions can also be accommodated.

Windows and door systems are typically custom-made products selected from the Salamander profile series and offer a wide range of design options. Due to the variability within the product range, it is generally not feasible to develop a specific Environmental Product Declaration (EPD) for each individual product variant.

Therefore, representative products are selected to cover the majority of product variations.

The environmental impacts presented below refer to the following PVC-based products:

- SALAMANDER (PVC) entrance doors with MACO / G-U hardware
- SALAMANDER (PVC) window systems with MACO / G-U hardware
- SALAMANDER (PVC) sliding systems (Siegenia HS portal)

Product application

Thanks to their versatility, PVC systems are used across a wide range of sectors:

- Residential construction: Most used in single-family houses and apartment buildings (windows, entrance doors, balcony doors, and patio doors).
- Commercial buildings: Office complexes, shopping centers, and retail facilities use PVC due to its energy efficiency and low maintenance requirements.
- Industrial applications: Manufacturing facilities, warehouses, and prefabricated buildings, where mechanical performance, chemical resistance, and cost-effectiveness are key.
- Healthcare and education: Hospitals and schools prefer PVC windows and doors for their hygienic properties, ease of cleaning, and ability to reduce ambient noise.
- Agriculture: Specialized plastic interior doors are widely used in stables and barns, where resistance to harsh environments and high humidity is required.

In addition to standard frames, PVC is used in the window and door industry for:

- Insulation profiles: Multi-chamber structures providing excellent thermal insulation performance (up to 250 times higher than aluminum).
- Sealing systems: Production of sealing tapes and gaskets for doors, windows, and automotive applications (e.g. trunk seals).

- Sliding systems: Lift-and-slide (HS) systems and tilt-and-slide doors that optimize interior space.
- Renovation: An ideal solution for refurbishing existing buildings due to ease of installation and high design flexibility.

PVC is widely used due to its resistance to corrosion, UV radiation, and moisture, resulting in a service life comparable to that of the building itself. The material is also self-extinguishing and recyclable, contributing to the safety and environmental performance of modern buildings.

Physical properties

Parameter	Windows	Doors	Windows	Doors
Frame depth (mm)	76	76	82	82
Glazing	from Ug = 0,5 W/(m²K) to Ug = 1,1 W/(m²K)	from Ug = 0,5 W/(m²K) to Ug = 1,1 W/(m²K)	from Ug = 0,5 W/(m²K) to Ug = 1,1 W/(m²K)	from Ug = 0,5 W/(m²K) to Ug = 1,1 W/(m²K)
Max. sash height (mm)	2600	2200	2400	2200
Max. sash width (mm)	1500	1200	1500	1200
Thermal transmittance (W/m²K) EN 14351-1+A2:2016	from Uw = 0,74 W/(m²K) to Uw = 1,2 W/(m²K)	from UD = 0,83 W/(m²K) to UD = 1,3 W/(m²K)	from Uw = 0,74 W/(m²K) to Uw = 1,2 W/(m²K)	from UD = 0,85 W/(m²K) to UD = 1,3 W/(m²K)
Air permeability EN 14351-1+A2:2016	Class 4	Class 4	Class 4	Class 4
Watertightness - unprotected (A)	Class 9A	Class 9A	Class 9A	Class 6A
Resistance to wind load EN 14351-1+A2:2016	Class C5	Class C3	from Class C2/B3	Class C2
Mechanical strength	Class 4	Class 4	Class 4	Class 4

Product standards

The products are manufactured in accordance with the following standards:

STN EN 14351-1+A2:2018 (74 6180) – Windows and doors – Product standard, performance characteristics – Part 1: Windows and external doors

STN EN 14351-2:2019 – Windows and doors – Product standard, performance characteristics – Part 2: Internal doors

The products are subject to conformity assessment, and the manufacturer issues the relevant Declaration of Performance. Product quality is ensured through an effective quality management system in accordance with ISO 9001 and in compliance with the technical regulations applicable to the product type.

Geographical scope

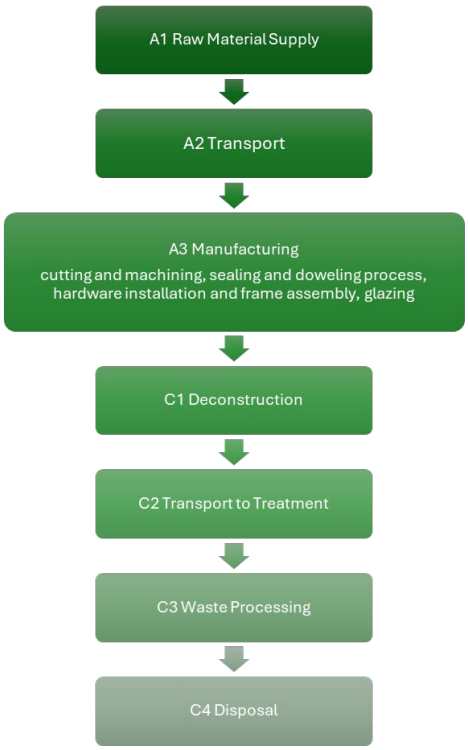
Global

Product contents information

Product components	Weight, kg	Post-consumer material, weight-%	Renewable material, weight-%
Glass	15,4	0	0
PVC	18,7	14	0
Steel	15,5	0	0
Others	0,4	0	0
TOTAL	50	0	0

Packaging materials	Weight, kg	Weight-% (versus the product)
PE + PP	0,14	0,28
Cardboard and paper	0,02	0,04
Wooden pallets	0,19	0,38
Steel stands	1,86	3,72
Others	0,2	0,4
TOTAL	2,41	4,82

Manufacturing process



Life cycle assessment

Cut-off criteria

The study does not exclude any modules or processes which are stated mandatory in the reference standard and the applied PCR. The study does not exclude any hazardous materials or substances. The study includes all major raw material and energy consumption. All inputs and outputs of the unit processes, for which data is available for, are included in the calculation. There is no neglected unit process more than 1% of total mass or energy flows. The module specific total neglected input and output flows also do not exceed 5% of energy usage or mass.

Allocation, estimations, and assumptions

The results presented in this EPD are based on production data from the single manufacturing site of HESTA, spol. s r.o., covering one year of production. Since production takes place at only one site, the results are considered directly representative of the declared products manufactured there. Allocation is performed with high accuracy and precision. The values per 1 m² of product used in this study are calculated based on the total product weight relative to annual production. As several product types are manufactured at the plant using similar production processes, allocation is based on the share of the declared product's annual production volume relative to the plant's total annual production volume. According to this ratio, the plant's total annual energy consumption, packaging materials, and generated waste are allocated to the declared product. The resulting product output is subsequently normalized to 1 m², and the corresponding quantity of product is used in the calculations.

Database(s) and LCA software

This EPD has been created using One Click LCA Pre-Verified EPD Generator. Ecoinvent v3.11 and One Click LCA databases were used as sources of environmental data.

LCA scenarios and additional technical information

Module A1

This stage considers the extraction and processing of all raw materials. Within the product stage accurate data has been used. In the case of absence in the database, it was modelled as close to reality as possible using proxy, representative datapoint.

Module A2

Module A2 covers the transport of material into the site of production. Generic database processes with site-specific parameters for distance were used.

Module A3

Module A3 covers on-site processes related to the production and packaging of windows, doors, and sliding systems. These processes were modelled based on primary data collection. At the plant, electricity, natural gas for heating, and propane are allocated based on annual consumption

Manufacturing energy scenario (A3)

Electricity data source and quality	Electricity, low voltage, residual mix (Reference product: electricity, low voltage)
Electricity kg CO_2 eq. / kWh	0,44
Energy data source and quality	Heat and power co-generation, natural gas, 1MW electrical, lean burn (Reference product: heat, district or industrial, natural gas)
Heating kg CO_2 eq. / kWh	0,0291
Energy data source and quality	Propane, burned in building machine (Reference product: propane, burned in building machine)
Propane kg CO_2 eq. / MJ	0,0923

Module A4

This module covers the transport of products to the customers. Generic database processes with site-specific parameters for distance were used. A weighted average of distances, based on transportation to customers for the year 2025, representing the geographical scope of the EPD was used.

Transportation scenario (A4)

Vehicle type used for transport	Transport, freight, lorry, 16-32 metric ton, diesel, EURO 6
Distance to the construction site	267,5
Capacity utilization	100%
Capacity utilization factor	1

Module A5

Module A5 includes processes related to the installation of products on the construction site. It accounts for electricity consumption during installation, as well as the treatment and disposal of packaging materials. The electricity consumption for the installation of a window, including operations such as screw fixing, is assumed to be 0,085 kWh.

Module C1

The de-construction and/or dismantling of the product take part of the demolition of the entire building. According to IES PCR, 1.1 kWh of diesel fuel was used to dismantle the window.

Module C2

This module covers the transport of material into recycling/ energy recovery/disposal plant according to Gervasio, H. and Dimova, S., JRC Technical Report: Life Cycle Assessment (LCA) Model for Buildings, 2018.

Module C3

According to EN 17213:2020, it was estimated that 35% of PVC is recycled, 40% of PVC is incinerated, 30% of glass is recycled, 95% of wooden parts are incinerated, and 95% of steel parts are recycled.

Module C4

According to EN 17213:2020, it was estimated that 25% of PVC, 70% of glass, 5% of wooden and 5% of steel parts are landfilled.

End of life (C1, C3, C4)

	Value	Unit
Collected separately	50	kg
Collected as mixed construction waste	0	kg
Reuse	0	kg
Recycling	26,0	kg
Energy recovery	7,7	kg
To landfill	16,3	kg

Module D

Module D accounts for the declared benefits associated with recycling and energy recovery from PVC, glass, wooden and metal parts originating from used windows. The benefits associated with the recycling of packaging materials were also considered in this module.

Data quality

The data quality information has been provided according to the requirements of EN 15941. The data assessment was done using the Product Environmental Footprint Category Rules. The data has been collected internally, considering the latest available average production amounts and measurements during the time period of 2024. The quality level in this study is qualified as Very Good. Data quality rating procedure has been performed using a rating system where “1” means Very good quality, and “5” means Very poor quality. No fair, poor or very poor data was found during the assessment of relevant data.

Geographical rating	Technology rating	Time-related rating	Average rating
1,3	1,5	1,0	1,3

Note on indicator consistency: A technical inconsistency between PENRT (total use of non-renewable primary energy) and ADP-fossil (abiotic depletion potential for fossil resources) has been identified in modules A5, C3 and C4. A contribution analysis shows that this discrepancy originates from the energy-accounting conventions and characterization factors of the background end-of-life datasets used (waste recycling/sorting and landfill treatment processes and exported energy from waste incineration with energy recovery). These inconsistencies are inherent to the background databases used and cannot be adjusted by the practitioner.

LCA results

Core environmental impact indicators – EN 15804+A2

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
GWP-total	kg CO_2 eq.	1,17E+02	2,51E+00	2,84E-01	1,99E-02	2,14E+00	1,70E+01	4,51E-01	-5,96E+01
GWP-fossil	kg CO_2 eq.	1,17E+02	2,51E+00	2,15E-01	1,99E-02	2,14E+00	1,67E+01	4,38E-01	-5,96E+01
GWP-biogenic	kg CO_2 eq.	-3,35E-01	0,00E+00	6,92E-02	0,00E+00	0,00E+00	2,52E-01	1,33E-02	-3,60E-02
GWP-LULUC	kg CO_2 eq.	1,01E-01	8,46E-04	1,58E-05	2,04E-06	7,22E-04	3,14E-03	1,03E-04	-6,47E-03
ODP	kg CFC-11 eq.	1,57E-05	5,47E-08	8,71E-10	2,96E-10	4,67E-08	8,22E-08	4,41E-09	-1,57E-07
AP	mol H^+ eq.	5,43E-01	5,38E-03	2,51E-04	1,78E-04	4,80E-03	1,84E-02	1,21E-03	-3,26E-01
EP-freshwater	kg P eq.	4,78E-02	1,74E-04	2,46E-05	6,41E-07	1,48E-04	1,18E-03	1,76E-05	-2,25E-02
EP-marine	kg N eq.	1,08E-01	1,30E-03	7,53E-05	8,29E-05	1,22E-03	5,53E-03	2,11E-03	-4,98E-02
EP-terrestrial	mol N eq.	1,12E+00	1,40E-02	5,37E-04	9,08E-04	1,31E-02	4,99E-02	5,07E-03	-5,48E-01
POCP	kg NMVOC eq.	4,36E-01	8,54E-03	1,67E-04	2,72E-04	7,57E-03	1,60E-02	1,84E-03	-1,93E-01
ADP-M&M	kg Sb eq.	1,04E-03	8,80E-06	4,18E-07	7,17E-09	7,50E-06	4,54E-05	3,30E-07	-4,53E-04
ADP-fossil	MJ	2,00E+03	3,56E+01	1,08E+00	2,60E-01	3,04E+01	3,51E+01	3,88E+00	-7,69E+02
WDP	m^3	5,68E+01	1,89E-01	1,84E-02	6,68E-04	1,61E-01	2,01E+01	1,71E-01	-2,30E+01

***GWP-total**: Global Warming Potential; **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; See "additional requirements" for indicator given as PO4 eq. **EP-marine**: Eutrophication potential, fraction of nutrients reaching freshwater end compartment; **EP-terrestrial**: Eutrophication potential, Accumulated Exceedance; **POCP**: Formation potential of tropospheric ozone; **ADP-M&M**: Abiotic depletion potential for non-fossil resources (minerals and metals); **ADP-fossil**: Abiotic depletion potential for fossil resources; **WDP**: Water deprivation potential, deprivation weighted water consumption*

Additional (optional) environmental impact indicators – EN 15804+A2

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
PM	Disease incidence	6,94E-06	1,88E-07	3,58E-09	5,09E-09	1,61E-07	3,64E-07	2,81E-08	-7,44E-06
IRP	kBq U235 eq.	1,58E+01	4,31E-02	3,05E-02	1,10E-04	3,67E-02	1,55E-01	3,02E-03	-1,03E+00
ETP-fw	CTUe	3,81E+03	3,03E+01	2,79E+00	1,48E-01	2,58E+01	1,34E+03	4,20E+02	-2,29E+03
HTP-c	CTUh	1,24E-07	4,22E-10	3,06E-11	2,03E-12	3,61E-10	6,88E-09	4,31E-11	-2,06E-07
HTP-nc	CTUh	1,31E-06	2,25E-08	9,17E-10	3,19E-11	1,92E-08	1,11E-07	1,90E-09	-7,40E-07
SQP	Dimensionless	4,85E+02	2,14E+01	2,61E-01	1,72E-02	1,82E+01	2,82E+01	9,17E+00	-7,29E+01

***PM**: Particulate matter emissions; **IRP**: Ionising radiation, human health; **ETP-fw**: Ecotoxicity (freshwater); **ETP-c**: Human toxicity, cancer effects; **HTP-nc**: Human toxicity, non-cancer effects; **SQP**: Land use related impacts / soil quality*

Use of natural resources

Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
RPEE	MJ	1,71E+02	5,88E-01	-6,54E-01	1,63E-03	5,01E-01	-8,25E-01	-1,87E-01	-4,25E+01
RPEM	MJ	3,38E+00	0,00E+00	-7,04E-01	0,00E+00	0,00E+00	-2,54E+00	-1,34E-01	3,60E-01
TPE	MJ	1,74E+02	5,88E-01	-1,36E+00	1,63E-03	5,01E-01	-3,37E+00	-3,21E-01	-4,21E+01
NRPE	MJ	1,54E+03	3,56E+01	-4,71E+00	2,60E-01	3,04E+01	-2,77E+02	-9,75E+01	-9,79E+02
NRPM	MJ	3,55E+02	0,00E+00	-5,86E+00	0,00E+00	0,00E+00	-2,62E+02	-8,68E+01	1,43E+02
TRPE	MJ	1,90E+03	3,56E+01	-1,06E+01	2,60E-01	3,04E+01	-5,39E+02	-1,84E+02	-8,36E+02
SM	kg	9,57E+00	1,61E-02	3,41E-04	1,07E-04	1,38E-02	3,67E-02	1,33E-03	2,49E+01
RSF	MJ	3,07E-01	2,12E-04	3,40E-06	2,81E-07	1,81E-04	2,74E-03	2,67E-05	3,68E-02
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
W	m^3	1,41E+00	4,36E-03	1,75E-04	1,66E-05	3,72E-03	4,59E-01	-5,73E-02	-4,94E-01

***RPEE**: Renewable primary energy resources used as energy carrier; **RPEM**: Renewable primary energy resources used as raw materials; **TPE**: Total use of renewable primary energy resources; **NRPE**: Non-renewable primary energy resources used as energy carrier; **NRPM**: Non-renewable primary energy resources used as materials; **TRPE**: Total use of non-renewable primary energy resources; **SM**: Use of secondary materials; **RSF**: Use of renewable secondary fuels; **NRSF**: Use of non-renewable secondary fuels; **W**: Use of net fresh water*

End of life – Waste

Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
HW	kg	1,81E+01	5,17E-02	4,96E-03	2,91E-04	4,41E-02	4,73E+00	6,38E-03	-1,07E+01
NHW	kg	4,24E+02	1,11E+00	3,15E-01	4,24E-03	9,47E-01	2,72E+01	4,10E+01	-1,10E+02
RW	kg	4,04E-03	1,06E-05	7,30E-06	2,71E-08	9,06E-06	3,96E-05	7,38E-07	-2,64E-04

***HW**: Hazardous waste disposed; **NHW**: Non-hazardous waste disposed; **RW**: Radioactive waste disposed*

End of life – Output flows

Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
CR	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
MR	kg	4,25E+00	0,00E+00	1,14E-01	0,00E+00	0,00E+00	2,60E+01	0,00E+00	0,00E+00
MER	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	MJ	0,00E+00	0,00E+00	3,82E-01	0,00E+00	0,00E+00	2,64E+01	0,00E+00	0,00E+00
ETE	MJ	0,00E+00	0,00E+00	5,20E-01	0,00E+00	0,00E+00	3,62E+01	0,00E+00	0,00E+00

***CR**: Components for reuse; **MR**: Materials for recycling; **MER**: Materials for energy recovery; **EEE**: Exported electric energy; **ETE**: Exported thermal energy*

Information describing biogenic carbon content at factory gate

Biogenic carbon content	Value	Unit
Biogenic carbon content in product	0,0723	kg C
Biogenic carbon content in the accompanying packaging	0,0189	kg C

Specific data (GWP-GHG) and data variation for A1-A3

Specific data and data variation	Value-%
Specific data	50,8
Variation - product	-8,64; 7,63%
Variation - site	0

Hazardous substances

☑ The product does not contain any REACH SVHC substances in amounts greater than 0,1 %.

Contact information

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Annex

Environmental impacts – EN 15804+A1, CML/ISO 21930

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
GWP	kg CO_2 eq.	1,17E+02	2,49E+00	2,18E-01	1,98E-02	2,13E+00	1,71E+01	4,25E-01	-5,89E+01
ODP	kg CFC-11 eq.	2,41E-05	4,36E-08	7,32E-10	2,36E-10	3,73E-08	7,77E-08	3,54E-09	-1,54E-07
AP	kg SO_2 eq.	4,46E-01	4,32E-03	2,06E-04	1,25E-04	3,83E-03	1,46E-02	8,95E-04	-2,74E-01
EP	kg PO_4 eq.	1,57E-01	1,14E-03	3,74E-05	2,95E-05	1,01E-03	3,74E-03	4,47E-04	-2,37E-02
POCP	kg C_2H_4 eq.	3,85E-02	4,46E-04	1,50E-05	9,40E-06	3,90E-04	1,47E-03	1,18E-04	-2,36E-02
ADP-M&M	kg Sb eq.	8,72E-04	8,60E-06	4,15E-07	6,95E-09	7,34E-06	3,82E-05	3,19E-07	-2,76E-04
ADP-fossil	MJ	1,72E+03	3,49E+01	5,31E-01	2,58E-01	2,98E+01	3,26E+01	3,84E+00	-6,58E+02

Environmental impacts – GWP-GHG

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
GWP - GHG	kg CO_2 eq.	1,18E+02	2,51E+00	2,15E-01	1,99E-02	2,14E+00	1,67E+01	4,38E-01	-5,96E+01

***GWP- GHG**: Global Warming Potential, greenhouse gases*