Environmental Product Declaration

EPD of multiple products, based on the worst case product in accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021 for:

Core Skirting Boards with MDF core

from

Döllken Profiles

SURTECO GROUP

Programme:	The International EPD® System, www.environdec.com
Programme operator:	EPD International AB
EPD registration number:	EPD-IES-0005791
Publication date:	2025-07-01
Valid until:	2030-06-20

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

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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
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Accountabilities for PCR, LCA and independent, third-party verification

Product Category Rules (PCR)

CEN standard EN 15804 serves as the Core Product Category Rules (PCR)

Product Category Rules (PCR): 2019:14 Construction Products PCR 2019:14 version 1.3.4

PCR review was conducted by: Martin Erlandsson, IVL Swedish Environmental Research Institute, contact via: Martin.Erlandsson@ivl.se

Life Cycle Assessment (LCA)

LCA accountability:

ecosy GmbH
Neubrücker Straße, Gebäude 9928
55768 Hoppstädten-Weiersbach
Germany

Office: +49 6782 172819
Web: www.eco-sy.com

Third-party verification

Independent third-party verification of the declaration and data, according to ISO 14025:2006, via:

☒ EPD verification by individual verifier

Third-party verifier:

Dr. Andreas Ciroth
Alt-Moabit 130-131
10557 Berlin
Germany

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 registered in different EPD programmes, or not compliant with EN 15804, may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same version number) or be based on fully-aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterisation factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.

EPDs of construction products may not be comparable if they do not comply with EN 15804+A2.

Company information

Owner of the EPD

Döllken Profiles GmbH
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59199 Bönen
Germany

Contact

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Description of the organisation

Döllken Profiles as part of Surteco Group

The trend-setting Group structure of SURTECO GROUP SE reflects the vision of the perfect decor network: SURTECO GROUP SE offers its customers multifaceted, multifunctional and professional solutions from a single source.

Sustainability at Döllken Profiles GmbH

As a globally thinking and acting company, we at Döllken Profiles GmbH always strive to provide the best performance in terms of quality and service, taking into account environmental and energy-relevant aspects in all our areas of activity and influence.
We see it as our duty to protect the environment, to conserve resources and to avoid or continuously minimise environmental pollution wherever possible in the course of our actions, and we are aware of the influence of our actions and our products, also on the quality of life of future generations. In this way, we also want to make our contribution to stopping climate change and maintaining biodiversity and ecosystems. More information on the Sustainable Development Goals and the contribution to the goals of the United Nations can be found here: SURTECO - Sustainability

Döllken Profiles as expert for skirting and profile solutions

For more than 60 years Döllken have been experts in the design, development and manufacture at different production sites within Germany of high quality plastic extruded profiles. Although our services are primarily intended for companies operating within the industrial sector, our capabilities and expertise enables us to support on all aspects of design and innovation led projects, supplying quality products to customers spanning multiple market sectors and many diverse applications on a global scale.

Management system-related certifications

All production sites are certificated as follows:

- ISO 9001:2015 - Quality Management
- ISO 14001:2015 - Environment Management
- ISO 50001:2011 - Energy Management

Name and location of production site

Production site: Bönen
Industriestraße 1
59199 Bönen, Germany

Product information

Product name

Core Skirting Board with MDF core.

This EPD includes all variants of core skirting boards with MDF core. An overview can be found in the appendix to the EPD.

Product description

The core skirting boards resist of MDF board which are coated with high-performance polymers.

The core skirtings are characterised by the following features:

- MDF cores made from certified softwood fibres
- Robust and durable due to sheathing with high-performance polymers
- Quick installation, as all core skirtings are punchable
- TCF (totally chlorinefree)

Application

Core skirtings are suitable to every floor coverings. They can be installed in no time at all and create a harmonious connection between wall and floor. Döllken core skirting boards are available in a wide range of colours and decors and are based on the most popular floor coverings.

Properties of the core skirting boards:

- Different sizes and colours/decors, depending on the variant
- With or without flexible soft lip at the top or/and bottom

Installation/Processing

The core skirting boards get glued on a wall.
Further laying instructions are available on: https://www.doellken-profiles.com/en/processing

Product Stewardship

All core skirting boards are free of harmful plasticisers in accordance with the REACH regulation. Doellken core skirtings are particularly environmentally friendly and have certifications, e.g. most of our core skirting boards are certified with the Greenguard Gold Standard and Blauer Engel (Blue Angel, Germany).

UN CPC code

CPC 31441: Medium density fibreboard (MDF)

Geographical scope

The EPD covers the geographical scope of production in Germany as well as the distribution and disposal of the packaged products within the EU including the United Kingdom and Northern Ireland.

LCA information

Functional unit / declared unit

One (1) linear meter of a core skirting board with MDF core incl. package with a weight of 0.976 kg.

Worst-case product for EPD: Hamburger Stil (100 mm)
The worst case product including all variants as shown in the appendix.

Reference service life

RSL is 20 years.

The service life corresponds to an equivalent floor covering and, with proper care, does not need to be renewed before the floor covering.

Time representativeness

2023

Database(s) and LCA software used

- Software: openLCA, v2.3
- Database: ecoinvent v3.9.1 EN15804

Description of system boundaries

Cradle to gate with options, modules C1–C4, module D and with optional modules (A1–A3 + C + D and additional modules).

Infrastructure is included in the background database, with the exception of transportation, energy generation and waste treatment, for which the infrastructure processes were excluded.

All processes have been included in the LCA, with exception of the infrastructure processes mentioned above.

Module A1-3
The module includes the machining processes from cradle to factory gate. This includes:

- provision of product and packaging specific materials
- transportation of materials to factory
- energy consumption of production processes, its emissions and waste generation

Module A4
Transportation of the packaged goods to customers via a generic distance of 100 km by lorry (>32 metric ton, EURO6).

Module A5
Disposal of product packaging (collection rate: 100%) including transportation of 50 km to waste incineration by lorry (>32 metric ton, EURO6) and product installation on the construction sites via hot melt adhesive.

Module C1
During the dismantling of the product from the building, there is no effort that has to be taken into account as part of the life cycle assessment.

Module C2
Transport to waste treatment at the end of product life via a generic distance of 50 km by lorry (>32 metric ton, EURO6).

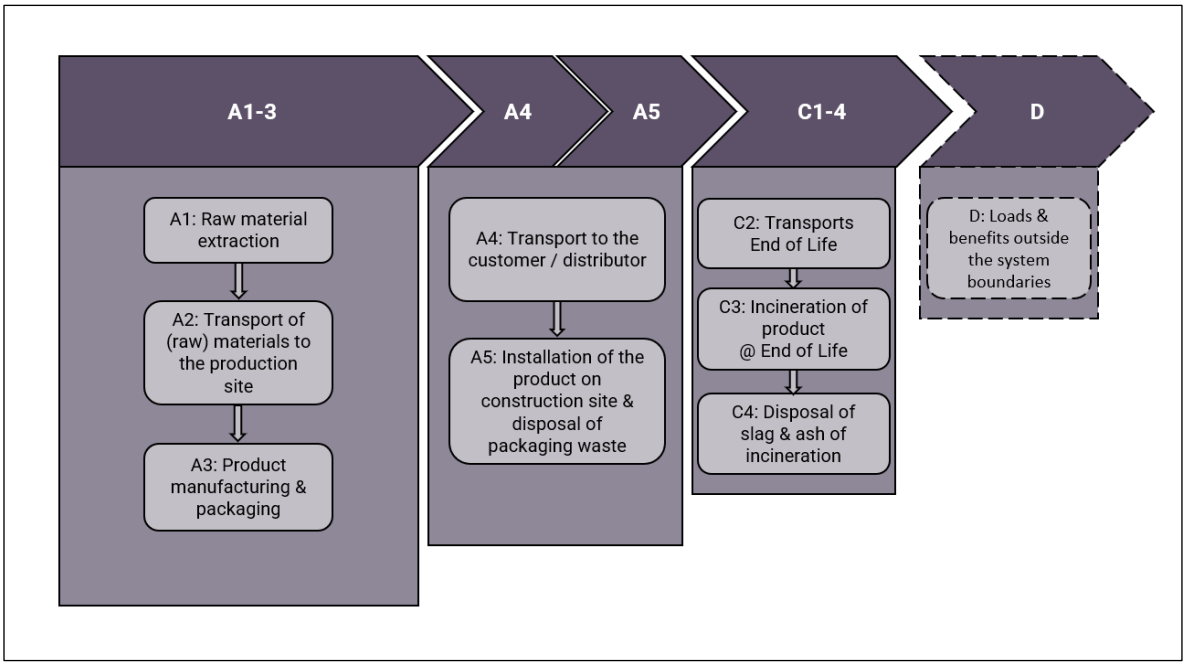
Module C3
The product is incinerated in a waste-to-energy plant (collection rate: 95%).

Module C4
Disposal of slag and ash from the incineration of the product originating from module C3.

Module D
Benefits and loads beyond the system boundaries resulting from waste treatment of

- module A3 (production waste),
- module A5 (packaging waste),
- module C3 (end of product life)

The diagram shows the input and output material & energy flows per module.



Electricity mix

A data set for electricity generation from hydropower, Norway, from ecoinvent 3.9.1 with an emission factor of 0.006 kg CO2/kWh was used. The electricity was purchased via guarantees of origin within the EU. The data set used represents in a good quality the electricity consumed by DOELLKEN PROFILES in 2023 as well as previous and future years.

Cut-off rules

Wherever possible, all data collected from the recipe and the bill of materials for the packaging material were taken into account. Thus, material flows with a mass fraction of less than one per-cent were also accounted for with exclusion of:

- a few packaging materials (0.1 mass-%)
- water consumption of a closed-loop water cooling system
- energy consumption of the internal transport and storage system

If generic data sets from the ecoinvent database are not available in the current version, they have been modelled in-house. Individual substances for which no data sets are available:

- substituted by substances with similar environmental effects, or
- if not possible, have been cut-off.

Allocation

The disposal of production waste (module A1-3) is subject to a fee. Therefore, it is not considered as a co-product. Thus, instead of economic a mass allocation was made.
Credits resulting from the thermal recovery of packaging waste (module A5) as well as from energy recovery or recycling in the end of life (module C3) are assigned to module D.

Allocations in the LCA datasets used follow the cut-off rules and are documented online. The database ecoinvent v3.9.1 EN 15804 was used. It can be assumed that the cut-off rules are consistent in the context of the requirements of EN 15804.

Data quality

The data used come from the manufacturer's data collection from the production year 2023. In addition to primary production data, necessary background data of the raw materials used were specifically modelled or come from the ecoinvent database for EN 15804 studies. Mixtures, energy inputs and waste generation of additives and other precursors not included in the ecoinvent database and for which suppliers are unable to provide information were estimated conservatively.

The manufacturer's production data were collected from recipes and bill of materials, production data were measured or calculated on the basis of an average annual value.

Overall, a good data quality can be assumed, the representativeness can be classified as very good.

Comparability

In principle, a comparison or evaluation of EPD data is only possible if all data sets to be compared have been created in accordance with EN 15804 and the building context or the product-specific performance characteristics are taken into account.

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

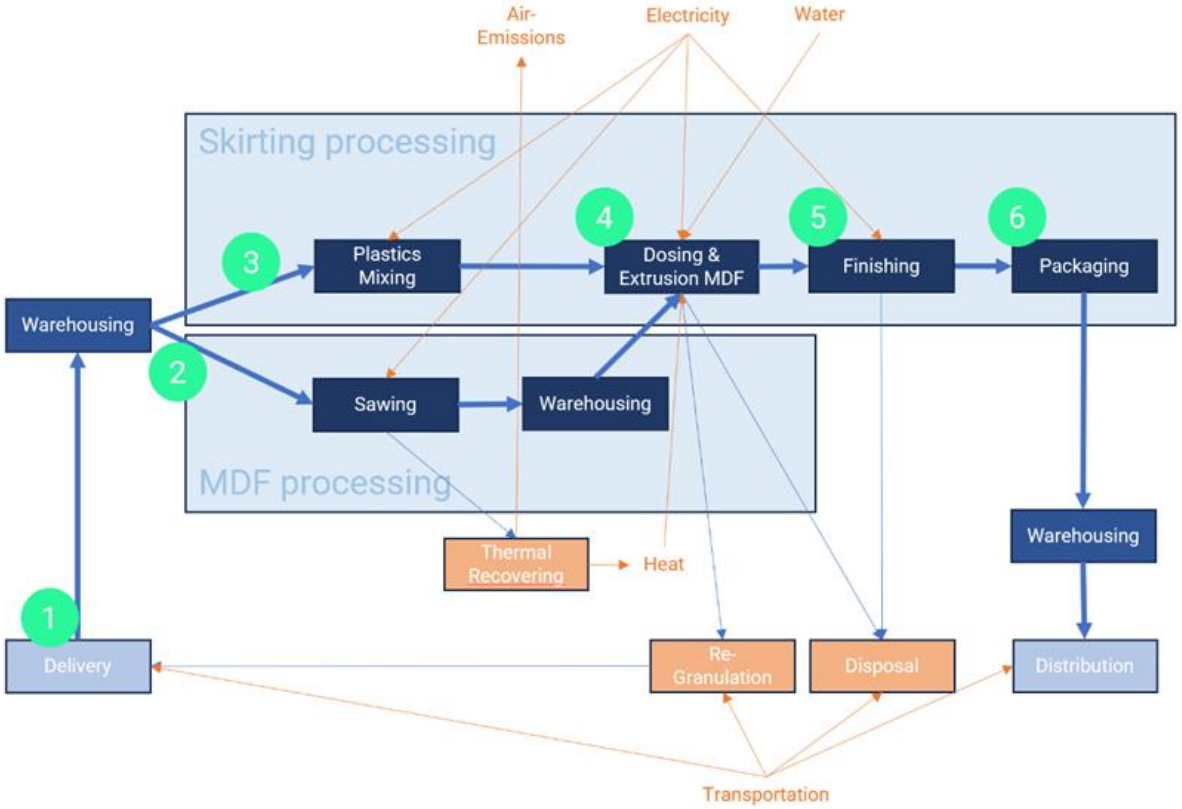
	Product stage			Construction process stage		Use stage						End of life stage					Resource recovery stage
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	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	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X
Geography	EU	EU	DE	EU	EU	-	-	-	-	-	-	-	EU	EU	EU	EU	EU
Specific data used	> 95 %					-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	346 %					-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	0 %					-	-	-	-	-	-	-	-	-	-	-	-

Disclaimer: The results of module A1-3 are not to be used without considering the results of C modules.

Due to the different variants and their maximum deviation of 346%, it can be assumed that the individual results for all environmental indicators in the comparison of the analysed worst case to the best case product are more than -10%.

Manufacturing

The following graphic gives an overview of the manufacturing process at plant Bönen, Germany.



Production of core skirting boards as follows:

1. Delivery of materials and warehousing.
2. Cutting the MDF board to the size of the skirting board and storing the semi-finished products. The wood waste is fed into an internal incinerator with heat recovery.
3. Mixing of the plastic compound for the polyblend and the soft lips.
4. Seamless wrapping of the HDF core with the polyblend and production of the soft lips to seal the skirting board against the wall and floor.
   The waste produced during commissioning is shredded in a granulator and fed directly to the extruder. Production waste that is contaminated and cannot be recycled is collected and sent for external recycling.
5. Printed variants are finished with water-based lacquers. Some colored skirting boards are provided with a protective film.
6. The finished products are packed in cardboard boxes.

The finished packaged goods are temporarily stored and then prepared for transport to the customer.

Content information

Product components	Weight, kg	Post-consumer material, weight-%	Biogenic material, weight-% and kg C/ declared unit
CSB, total	0.77	0	79%; 0.217
Packaging materials	**Weight, kg**	**Weight-% (versus the product)**	**Weight biogenic carbon, kg C/declared unit**
Cardboard	0.03	3.5%	0.011

Dangerous substances from the candidate list of SVHC for Authorisation	EC No.	CAS No.	Weight-% per functional or declared unit
N/A	-/-	-/-	-/-

Results of the environmental performance indicators

Mandatory impact category indicators according to EN 15804

The characterization factors according to EN15804+A2 were used for the impact assessment. These correspond to the European characterization model according to the Environmental Footprint Method in version 3.1.

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

Results per 1 running meter of Core Skirting Boards with MDF core									
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-fossil	kg CO2 eq.	1,27E+00	7,51E-03	4,59E-02	0,00E+00	3,70E-03	6,61E-01	2,43E-05	-1,97E+00
GWP-biogenic	kg CO2 eq.	-1,02E+00	2,24E-06	4,85E-02	0,00E+00	1,10E-06	1,50E+00	2,11E-07	-1,58E-03
GWP-luluc	kg CO2 eq.	1,55E-03	4,48E-07	5,77E-03	0,00E+00	2,21E-07	8,61E-06	4,88E-09	-2,43E-04
GWP-total	kg CO2 eq.	2,56E-01	7,51E-03	1,00E-01	0,00E+00	3,70E-03	2,16E+00	2,45E-05	-1,97E+00
ODP	kg CFC 11 eq.	2,12E-08	1,67E-10	1,06E-09	0,00E+00	8,25E-11	2,35E-09	3,96E-13	-8,88E-08
AP	mol H+ eq.	7,33E-03	1,03E-05	2,04E-04	0,00E+00	5,05E-06	4,56E-04	2,09E-07	-1,66E-03
EP-freshwater	kg P eq.	3,71E-04	9,83E-08	6,96E-05	0,00E+00	4,85E-08	3,24E-06	4,25E-07	-6,29E-05
EP-marine	kg N eq.	1,70E-03	2,57E-06	7,89E-05	0,00E+00	1,26E-06	2,72E-04	9,54E-08	-5,66E-04
EP-terrestrial	mol N eq.	1,98E-02	2,50E-05	5,07E-04	0,00E+00	1,23E-05	2,30E-03	1,04E-06	-6,09E-03
POCP	kg NMVOC eq.	6,86E-03	1,87E-05	1,84E-04	0,00E+00	9,24E-06	5,67E-04	3,12E-07	-3,59E-03
ADP-minerals&metals*	kg Sb eq.	6,94E-06	1,23E-09	2,86E-07	0,00E+00	6,05E-10	1,08E-07	1,39E-11	-9,89E-07
ADP-fossil*	MJ	2,48E+01	1,04E-01	1,36E+00	0,00E+00	5,12E-02	2,76E-01	3,21E-04	-2,99E+01
WDP*	m3	1,14E+00	1,42E-04	5,21E-02	0,00E+00	6,99E-05	1,45E-01	1,20E-06	-6,48E-02
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								

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

Additional mandatory and voluntary impact category indicators

Results per 1 running meter of Core Skirting Boards with MDF core									
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-GHG[1]	kg CO_2 eq.	1,27E+00	7,51E-03	5,16E-02	0,00E+00	3,70E-03	6,61E-01	2,43E-05	-1,97E+00
Additional voluntary indicators e.g. the voluntary indicators from EN 15804 or the global indicators according to ISO 21930:2017									

[1] This indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO_2 is set to zero.

Resource use indicators

Results per 1 running meter of Core Skirting Boards with MDF core									
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	MJ	1,38E+01	3,68E-04	1,94E-01	0,00E+00	1,81E-04	1,62E-02	3,18E-05	-2,76E-01
PERM	MJ	1,80E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	3,18E+01	3,68E-04	1,94E-01	0,00E+00	1,81E-04	1,62E-02	3,18E-05	-2,76E-01
PENRE	MJ	2,48E+01	9,41E-02	1,24E+00	0,00E+00	4,64E-02	2,62E-01	2,92E-04	-2,85E+01
PENRM	MJ	1,95E+00	9,72E-03	1,32E-01	0,00E+00	4,79E-03	1,38E-02	2,91E-05	-1,42E+00
PENRT	MJ	2,67E+01	1,04E-01	1,37E+00	0,00E+00	5,12E-02	2,76E-01	3,21E-04	-2,99E+01
SM	kg	3,78E-01	2,59E-05	1,80E-03	0,00E+00	1,28E-05	6,10E-04	3,78E-07	-1,77E-02
RSF	MJ	3,62E-02	9,13E-06	6,48E-04	0,00E+00	4,50E-06	2,52E-04	1,38E-07	-7,64E-03
NRSF	MJ	7,26E-02	1,62E-05	1,09E-03	0,00E+00	8,00E-06	5,56E-04	7,79E-08	-9,27E-03
FW	m^3	-6,18E-02	3,31E-06	1,07E-03	0,00E+00	1,63E-06	2,47E-03	2,58E-08	-1,66E-03
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 indicators

Results per 1 running meter of Core Skirting Boards with MDF core									
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
Hazardous waste disposed	kg	5,21E-05	6,89E-07	3,77E-06	0,00E+00	3,39E-07	1,08E-06	2,10E-09	-1,25E-04
Non-hazardous waste disposed	kg	1,40E-01	3,75E-05	3,48E-03	0,00E+00	1,85E-05	2,53E-02	4,37E-06	-3,10E-02
Radioactive waste disposed	kg	2,85E-05	1,02E-08	7,20E-07	0,00E+00	5,04E-09	2,43E-07	6,87E-11	-7,88E-06

Output flow indicators

Results per 1 running meter of Core Skirting Boards with MDF core									
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
Components for re-use	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
Material for recycling	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
Materials for energy recovery	kg	6,76E-02	0,00E+00	1,63E-03	0,00E+00	0,00E+00	4,58E-03	3,41E-07	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
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

References

ecoinvent v3.9.1
Documentation of changes implemented in the ecoinvent database v3.9.1 (2022.12.15).

EN 15804:2022-03
Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products (EN 15804:2012 + A2:2019 + AC:2021).

General Programme Instructions (GPI) for the International EPD® System
Version 5.0, EPD International (2024-06-19).

ISO 14025:2011-10
Environmental labels and declarations - Type III environmental declarations - Principles and procedures (ISO 14025:2011).

ISO 14040:2021-02
Environmental management - Life cycle assessment - Principles and Framework (ISO 14040:2006 + Amd 1:2020).

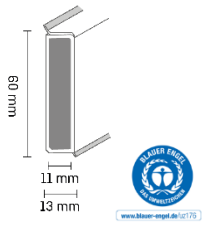
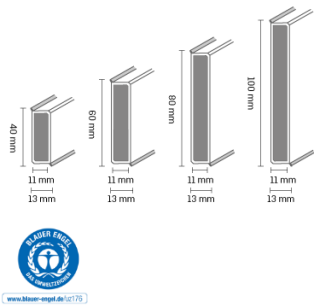
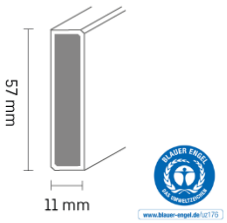
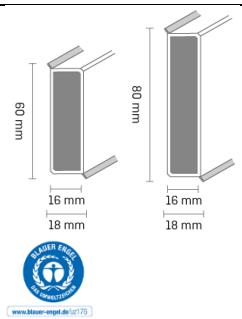
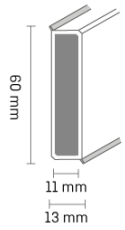
ISO 14044:2021-02
Environmental management - Life cycle assessment - Requirements and guidelines (ISO 14044:2006 + Amd 1:2017 + Amd 2:2020)

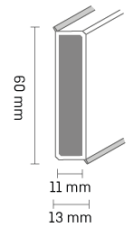
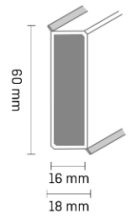
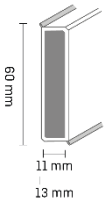
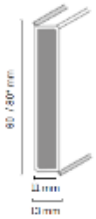
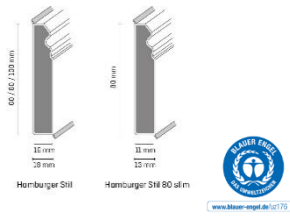
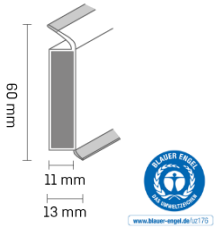
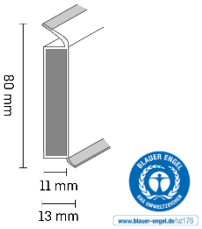
openLCA
Comprehensive User Manual, GreenDelta GmbH (February 2020).

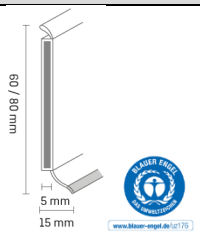
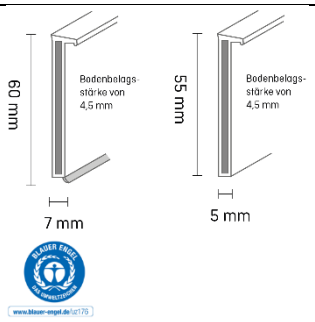
Product Category Rules (PCR)
PCR 2019:14 Construction products (EN 15804+A2), Version 1.3.4, EPD International (2023-04-30).

Appendix

Overview of the product variants with HDF core (as at: 2024):

Product	Cross section	Surface	Lips	Heigh [mm]	Packaging unit
Cubu Decor		37 different decors	Flexible soft lip at the top and bottom	60	10 x 2.5 m
Cubu flex life		22 different colours	Flexible soft lip at the top and bottom	40, 60, 80, 100	10 x 2.5 m
Cubu life 60		2 different colours	without	60	10 x 2.5 m
Cubu flex life XL		4 different colours	Flexible soft lip at the top and bottom	60 → 80 →	8 x 2.5 m 6 x 2.5 m
Cubu Stone & Style		4 different decors	Flexible soft lip at the top and bottom	60	10 x 2.5 m

Product	Cross section	Surface	Lips	Heigh [mm]	Packaging unit
Cubu Touch & Style		59 different decors	Flexible soft lip at the top and bottom	60	10 x 2.5 m
Cubu XL Touch & Style		59 different decors	Flexible soft lip at the top and bottom	60	10 x 2.5 m
Cubu structured		8 different decors	Flexible soft lip at the top and bottom	60	10 x 2.5 m
Cubu flex life Premium		2 different decors	Flexible soft lip at the top and bottom	60	10 x 2.5 m
Hamburger Stil		2 different colours	Flexible soft lip at the top and bottom	60 → 80 → 100 →	8 x 2.5 m 6 x 2.5 m 7 x 2.5 m
EP 60/13 flex life		300+ different decors	Flexible soft lip at the top and bottom	60	10 x 2.5 m
EP 80/13 flex life		300+ different decors	Flexible soft lip at the top and bottom	80	10 x 2.5 m

Product	Cross section	Surface	Lips	Heigh [mm]	Packaging unit
Core skirting board 60 / 80		40 different variants (decors & colours)	Flexible soft lip at the top and bottom	60 → 80 →	20 x 2.55 m 10 x 2.575 m
D 60 life Top		40 different colours	With and without flexible soft lip at the bottom	60, 55	20 x 5.15 m

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