Environmental Product Declaration

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

Self-adhesive mesh tape, fibreglass

from

Stokvis Tape Group

Programme:	The International EPD® System, www.environdec.com
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General information

Programme information

Programme:	The International EPD® System
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Accountabilities for PCR, LCA and independent, third-party verification
Product Category Rules (PCR)
CEN standard EN 15804+A2 serves as the Core Product Category Rules (PCR)
Product Category Rules (PCR): Construction Products PCR 2019:14 v1.3.4
PCR review was conducted by: *The Technical Committee of the International EPD® System. Chair:* Claudia A. Peña, University of Concepción, Chile
Life Cycle Assessment (LCA)
LCA accountability: *Amy Stockwell, Carbonzero AB, amy.stockwell@carbonzero.se*
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: *Stephen Forson, Viridis Pride, s.forson@viridispride.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 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.

Company information

Owner of the EPD: Stokvis Tape Group
Contact: Niclas Andersen, Niclas.Andersen@stokvistapes.se, PO Box 769, SE-601 17 Norrköping, SWEDEN
Description of the organisation: Stokvis Tapes Group is your solution-driven innovative partner for pressure-sensitive adhesive and component solutions with 16 manufacturing sites and 18 sales offices across the globe. The group is at the forefront of developments and innovative solutions in the tape Industry. The international presence allows Stokvis Tapes to offer customers a perfect combination of local presence and international expertise and purchase power, provided through 1,000 passionate, enthusiastic, customer-orientated co-workers. With over 60 years of experience in the adhesive industry, Stokvis Tapes has built a strong reputation for solving the most demanding acoustic, bonding and fixing, insulation, masking, protection, sealing, shielding, thermal management and packaging applications. With our process development expertise, we support our customers in developing innovative and unique products. Customized to your needs – thanks to our development and converting capabilities.

Stokvis Tapes delivers focused and specialized services to meet the needs of your product. Our industry leading service capabilities are dedicated to ensuring production and the environment are optimized and controlled to meet the specific needs of each customer and application. Our service goes beyond providing the best tape for your application. With our in-house converting machines, we can customize tapes to any desired size or shape.

Our quality team works directly with manufacturing to adhere to provide validated manufacturing processes fully compliant to the relevant requirements, from process validation to full documentation and traceability.

At Stokvis Tapes, we recognize our responsibility of contributing towards combating the global sustainability challenges. Our approach to sustainability covers all three pillars of sustainability, however, minimizing our environmental footprint while enhancing long-term benefits for our business is one of our top priorities and ensuring transparency of our products, we offer is a step in the direction towards knowing what challenges we have ahead of us. As we look towards the future, our goal is to continuously innovate and provide products and services that not only meet our customers' needs but also contribute to a more sustainable future.

Product-related or management system-related certifications: In the Nordics, we are ISO 9001 certified and our manufacturing site in Sweden is certified according to the following standards: ISO 14001, ISO 13485, IATF 16949 and cleanroom manufacturing ISO Class 8 against ISO 14644-1:2016.
Name and location of production site(s): Shanghai, China

Product information

Product name: Self-adhesive mesh tape, fibreglass
Product description: The Adhesive Mesh Tape consists of a fibre glass mesh coated with an acrylic adhesive. It has good resistance against moisture and water, and high tensile strength in both directions. It is easy to apply, even to irregular surfaces. The tape is used for various glass fibre applications in construction and industrial applications. It has an application temperature on minimum 5 °C.
Description of production process: The tapes are made by applying adhesive to a polymer backing material and then drying. This product is then wound onto a cardboard core and cut to size.

UN CPC code: 36920 self-adhesive plates, sheets, film foil, tape, strip and other flat shapes of plastics
Geographical scope: the tape is produced in China (A1-A3) and sold in Nordics (module C).
Products included:
214500WH Double-sided Adhesive Mesh Tape, fibreglass
GL50100 Self-Adhesive Mesh Tape, fibreglass
GL5020 Self-Adhesive Mesh Tape, fibreglass

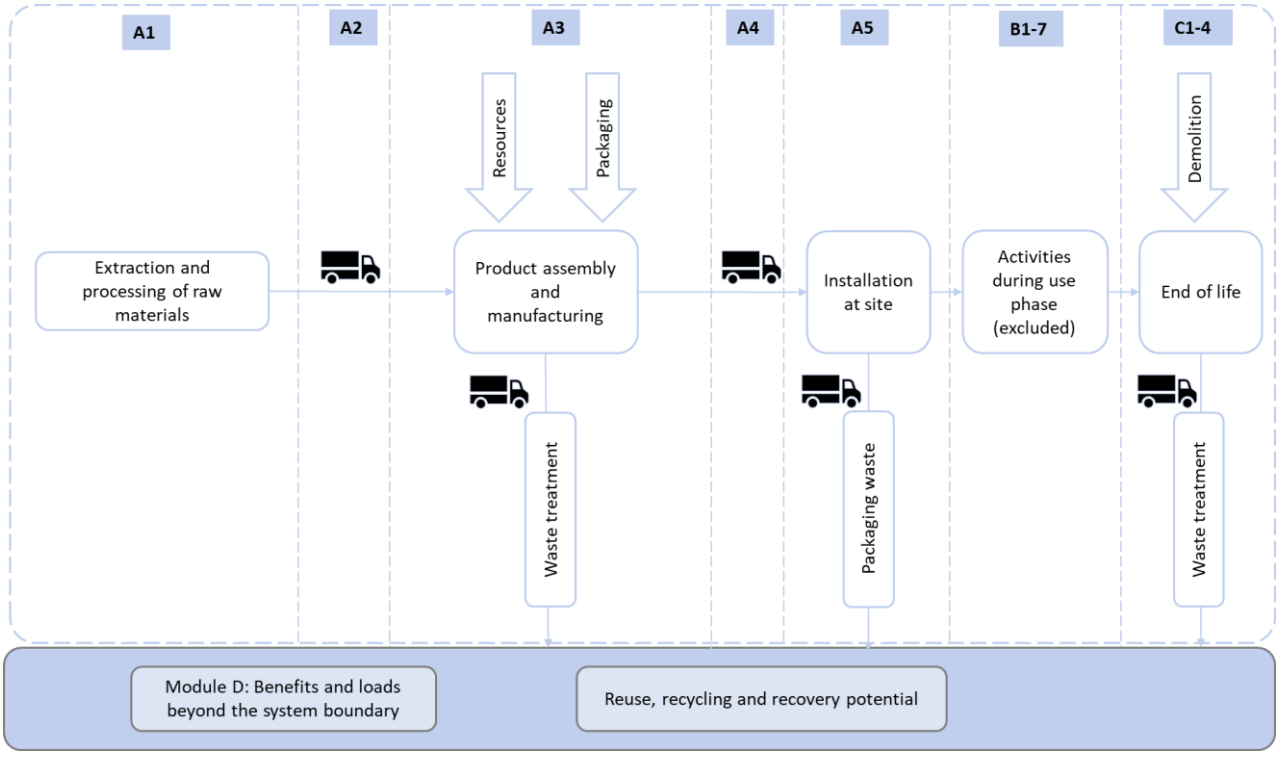
Technical specification:

	Value	Unit	Test method
Weight	75 – 80 ±7	g/m^2	
Fabric count	Warp: 9±0.5 Weft: 9±0.5	Per inch	
Tensile strength	Length: 220 – 225 Width 220 - 275	N/25mm	AFERA 5004
Service temperature	-40 – 70	°C	AFERA 5013
Application temperature	Minimum 5	°C	AFERA 5013

LCA information

Declared unit: 1 m^2 tape. The worst-case scenario weighs 8.5E-02kg excluding cardboard core.
Reference service life: not applicable
Time representativeness: Specific data from 2023. Oldest dataset from 2019.
Database(s) and LCA software used: LCA for Experts (GaBi), with Sphera and Ecoinvent 3.9.1 databases. The characterization factors used in this study refer to PCR 2019:14 and EN 15804+A2 (based on EF 3.1).
Description of system boundaries: Cradle to gate with options: A1-A3, A4 modules C1–C4, module D

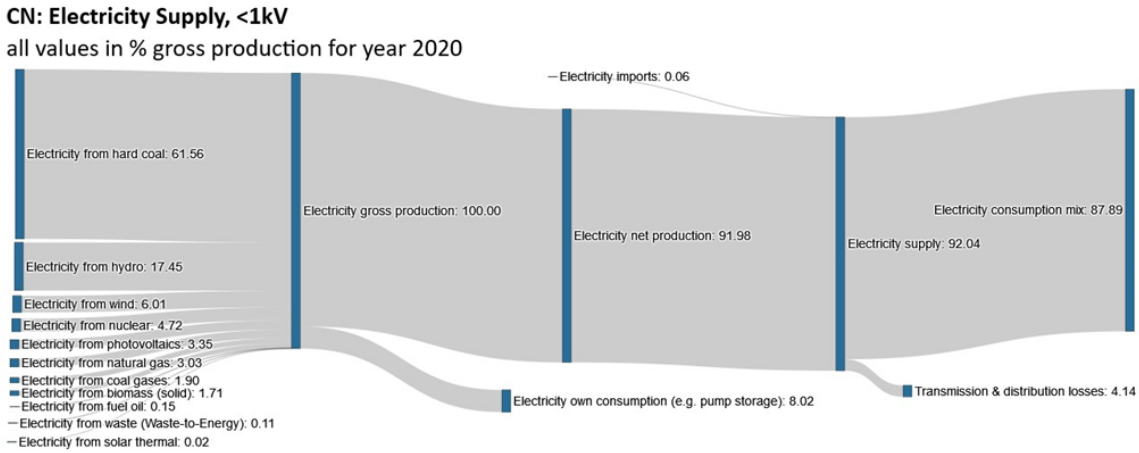
System diagram:



A2 includes transport from Chinese supplier to Swedish warehouse

Electricity grid mix

There was no residual grid mix data available for China, so the Sphera grid mix data was chosen. It has a GWP-GHG of 0.786 kg CO_2e per kWh.



Transport to the building site

Scenario information	Unit (per declared unit)
Transportation	GLO: Truck-trailer, Euro 0 - 6 mix, 34 - 40t gross weight 27t payload capacity
Fuel type	RER: Diesel mix at filling station
Fuel consumption	0.0167 kg/tkm
Distance	500 km
Capacity utilisation (including empty returns)	60 % (dataset default value)
Bulk density of transported products	476 kg/m^3
Volume capacity utilisation factor (factor: =1 or <1 or ≥ 1 for compressed or nested packaged products)	Not applicable

Installation

Tape can be used in a wide variety of ways and is usually installed by hand, therefore is considered negligible impact. However, the packaging is disposed of, assumed Nordic average of paper and plastic as per Eurostat. The pallet is assumed to be reused.

Process per declared unit	Paper	Plastic
Collection process specified by type	3.33E-03 kg collected	2.11E-03 kg collected
Recovery system specified by type	0 kg for re-use	0 kg for re-use
	3.13E-03 kg for recycling	1.06E-03 kg for recycling
	1.33E-04 kg for energy recovery (40% efficiency)	8.23E-04 kg for energy recovery (42% efficiency)
Disposal specified by type	6.67E-05 kg for landfill	6.33E-05 kg for landfill
	0 kg for incineration without energy recovery	1.69E-04 kg for incineration without energy recovery
Assumptions for scenario development	Waste transported 100 km by truck. Landfill recovers 2.68E-01 MJ/kg electricity Incineration with energy recovery recovers 2.14E+00 MJ/kg electricity and 3.89E+00 MJ/kg thermal energy	Waste transported 100 km by truck. Landfill recovers 2.68E-01 MJ/kg electricity Incineration with energy recovery recovers 4.54E+00 MJ/kg electricity and 8.11E+00 MJ/kg thermal energy

End-of-Life

End of life is Nordic average of mixed waste as per Eurostat. However, as the tape cannot be recycled, the recycling option was ignored.

Process	Unit per declared unit
Collection process specified by type	8.50E-02 kg collected with mixed construction waste
Recovery system specified by type	0 kg for re-use
	0 kg for recycling
	5.18E-02 kg for energy recovery (44% efficiency)
Disposal specified by type	2.01E-02 kg for landfill
	1.30E-02 kg for incineration without energy recovery
Assumptions for scenario development	Waste transported 100 km by truck. Landfill recovers 2.68E-01 MJ/kg electricity Incineration with energy recovery recovers 6.68E+00 MJ/kg electricity and 1.19E+01 MJ/kg thermal energy

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	CN	CN	CN	Nordic	Nordic	-	-	-	-	-	-	-	Nordic				Nordic
Specific data used	<10%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	-22% - 0%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	0%			-	-	-	-	-	-	-	-	-	-	-	-	-	-

Content information

Product components	**Weight, kg**	**Post-consumer material, weight-%**	**Biogenic material, weight-% and kg C /m²**
Fibreglass backing	4.70E-02	0	0
Adhesive	3.80E-02	0	0
Core	3.33E-03	0	44%, 1.48E-03 kg
TOTAL	8.83E-02	0	0
Packaging materials	**Weight, kg**	**Weight-% (versus the product)**	**Weight biogenic carbon, kg C /m²**
LDPE	2.11E-03	2%	0
Pallet	4.29E-03	5%	1.78E-03
TOTAL	6.40E-03	7%	1.78E-03

There are no dangerous substances from the candidate list of SVHC for Authorisation

Results of the environmental performance indicators

Disclaimers

The environmental performance results are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins or risks. The results of the end-of-life stage (module C) should be considered when using the results of the production stage (modules A1-A3).

The 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.

The results of the impact categories abiotic depletion of minerals and metals, land use, human toxicity (cancer), human toxicity, non-cancer and ecotoxicity (freshwater) may be highly uncertain in LCAs that include capital goods/infrastructure in generic datasets, in case infrastructure/capital goods contribute greatly to the total results. This is because the LCI data of infrastructure/capital goods used to quantify these indicators in currently available generic datasets sometimes lack temporal, technological and geographical representativeness. Caution should be exercised when using the results of these indicators for decision-making purposes.

ILCD classification	Indicator	Disclaimer
ILCD Type 1	Global warming potential (GWP)	None
	Depletion potential of the stratospheric ozone layer (ODP)	None
	Potential incidence of disease due to PM emissions (PM)	None
ILCD Type 2	Acidification potential, Accumulated Exceedance (AP)	None
	Eutrophication potential, Fraction of nutrients reaching freshwater end compartment (EP-freshwater)	None
	Eutrophication potential, Fraction of nutrients reaching marine end compartment (EP-marine)	None
	Eutrophication potential, Accumulated Exceedance (EP-terrestrial)	None
	Formation potential of tropospheric ozone (POCP)	None
	Potential Human exposure efficiency relative to U235 (IRP)	1
ILCD Type 3	Abiotic depletion potential for non-fossil resources (ADP-minerals & metals)	2
	Abiotic depletion potential for fossil resources (ADP-fossil)	2
	Water (user) deprivation potential, deprivation-weighted water consumption (WDP)	2
	Potential Comparative Toxic Unit for ecosystems (ETP-fw)	2
	Potential Comparative Toxic Unit for humans (HTP-c)	2
	Potential Comparative Toxic Unit for humans (HTP-nc)	2
	Potential Soil quality index (SQP)	2
Disclaimer 1 – This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.		
Disclaimer 2 – 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.		

Mandatory impact category indicators according to EN 15804

Results per declared unit									
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-fossil	kg CO_2 eq.	2.08E-01	3.59E-03	3.60E-04	0.00E+00	6.44E-04	0.00E+00	1.97E-01	-7.28E-02
GWP-biogenic	kg CO_2 eq.	-1.10E-02	1.11E-05	1.20E-02	0.00E+00	1.99E-06	0.00E+00	1.25E-02	-3.61E-04
GWP-luluc	kg CO_2 eq.	1.62E-04	5.87E-05	4.39E-07	0.00E+00	1.05E-05	0.00E+00	2.25E-06	-1.43E-05
GWP-total	kg CO_2 eq.	1.98E-01	3.66E-03	1.24E-02	0.00E+00	6.56E-04	0.00E+00	2.10E-01	-7.32E-02
ODP	kg CFC 11 eq.	2.57E-09	5.15E-16	1.07E-16	0.00E+00	9.24E-17	0.00E+00	1.22E-14	-6.62E-13
AP	mol H^+ eq.	2.39E-03	4.58E-06	1.54E-07	0.00E+00	8.23E-07	0.00E+00	2.45E-05	-8.15E-05
EP-freshwater	kg P eq.	3.69E-05	1.49E-08	2.56E-09	0.00E+00	2.68E-09	0.00E+00	3.87E-07	-1.52E-07
EP-marine	kg N eq.	3.41E-04	1.69E-06	6.67E-08	0.00E+00	3.03E-07	0.00E+00	8.20E-06	-2.52E-05
EP-terrestrial	mol N eq.	3.55E-03	1.96E-05	6.67E-07	0.00E+00	3.53E-06	0.00E+00	1.11E-04	-2.69E-04
POCP	kg NMVOC eq.	1.12E-03	4.65E-06	1.78E-07	0.00E+00	8.35E-07	0.00E+00	2.27E-05	-7.21E-05
ADP-minerals& metals	kg Sb eq.	9.43E-07	3.04E-10	3.33E-12	0.00E+00	5.46E-11	0.00E+00	1.47E-10	-6.88E-09
ADP-fossil	MJ	3.45E+00	4.60E-02	6.02E-04	0.00E+00	8.26E-03	0.00E+00	3.61E-02	-1.33E+00
WDP	m^3	1.21E-01	5.41E-05	5.33E-05	0.00E+00	9.71E-06	0.00E+00	1.81E-02	-8.08E-03
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								

Additional mandatory and voluntary impact category indicators

		Results per functional or declared unit							
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-GHG[1]	kg CO_2 eq.	2.10E-01	3.66E-03	4.40E-04	0.00E+00	6.57E-04	0.00E+00	2.10E-01	-7.32E-02

Resource use indicators – using option B for primary energy calculations

		Results per functional or declared unit							
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	MJ	8.01E-01	3.96E-03	8.90E-05	0.00E+00	7.12E-04	0.00E+00	8.01E-03	-4.97E-01
PERM	MJ	1.42E-01	0.00E+00	-1.40E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	9.43E-01	3.96E-03	-1.40E-01	0.00E+00	7.12E-04	0.00E+00	8.01E-03	-4.97E-01
PENRE	MJ	3.45E+00	4.60E-02	6.02E-04	0.00E+00	8.26E-03	0.00E+00	3.61E-02	-1.33E+00
PENRM	MJ	1.16E+00	0.00E+00	-6.63E-02	0.00E+00	0.00E+00	0.00E+00	-2.73E-01	0.00E+00
PENRT	MJ	4.61E+00	4.60E-02	-6.57E-02	0.00E+00	8.26E-03	0.00E+00	-2.37E-01	-1.33E+00
SM	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
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
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
FW	m^3	2.89E-03	4.42E-06	1.29E-06	0.00E+00	7.93E-07	0.00E+00	4.24E-04	-3.45E-04
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							

[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.

Waste indicators

		Results per declared unit							
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
Hazardous waste disposed	kg	1.59E-09	1.76E-12	1.39E-13	0.00E+00	3.16E-13	0.00E+00	1.60E-11	-1.25E-09
Non-hazardous waste disposed	kg	1.14E-02	7.51E-06	5.44E-03	0.00E+00	1.35E-06	0.00E+00	8.50E-02	-7.59E-04
Radioactive waste disposed	kg	3.91E-05	8.38E-08	9.10E-09	0.00E+00	1.50E-08	0.00E+00	1.46E-06	-9.66E-05

Output flow indicators

		Results per declared unit							
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
Components for re-use	kg	1.45E-04	0.00E+00	4.29E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Material for recycling	kg	6.92E-05	0.00E+00	3.19E-03	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
Exported energy, electricity	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.41E-01	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	5.96E-01	0.00E+00

References

EN 15804:2012+A2	Sustainability of construction works – Environmental product declaration – Core rules for the product category of constructions products
Eurostat (2022)	Treatment of waste by waste category, hazardousness and waste management operations https://ec.europa.eu/eurostat/databrowser/view/env_wastrt/default/table?lang=en&category=env.env_was.env_wasgt accessed 2024-10-01
EPD International (2024)	General Programme Instructions of the International EPD® System, version 5.0
ISO 14020:2022	International Standard ISO 14020 – Environmental statements and programmes for products – Principles and general requirements
ISO 14025:2006	International Standard ISO 14025 – Environmental labels and declarations — Type III environmental declarations — Principles and procedures
ISO 14040:2006	International Standard ISO 14040: Environmental Management – Life cycle assessment – Principles and framework. Second edition 2006-07-01.
ISO 14044:2006	International Standard ISO 14044: Environmental Management – Life cycle assessment – Requirements and Guidelines.
PCR 2019:14	Construction products v1.3.4
Sicab nd	Thematic Report 15 China Municipal Solid Waste Management Industry https://www.sicab.net/wp-content/uploads/2020/05/15.-China-Municipal-Solid-Waste-Management-Industry-Report.pdf

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