Environmental Product Declaration

In accordance with ISO 14025:2006, EN15804+A2:2019/AC:2021 and ISO21930:2017 for:

DITRA® Uncoupling Membrane

From Schluter® Systems

Programme:	The International EPD® System, www.environdec.com
Programme operator:	EPD International AB; EPD is registered through aligned regional hub: EPD North America (www.epdna.com)
EPD registration number:	EPD-IES-0021358
Publication date:	2025-04-30
Valid until:	2030-04-30

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

Accountabilities for PCR, LCA and independent, third-party verification	
General Program Instructions and Product Category Rules (PCR)[1]	
General Programme Instructions for the International EPD® System. Version 4.0. 2021-03-29	
CEN standard EN 15804 and ISO 21930 serve as the core Product Category Rules (PCR)	
Construction Products PCR 2019: 14, Version 1.3.4	
PCR review was conducted by: The Technical Committee of the International EPD® System. A full list of members available on www.environdec.com. The review panel may be contacted via info@environdec.com. Members of the Technical Committee were requested to state any potential conflict of interest with the PCR moderator or PCR committee and were excused from the review. Chair of the PCR Review: Claudia A. Peña Review Dates: 2019-11-28 until 2019-12-18	
The Sub-Category PCR review was conducted by: No sub-category PCR available at the time of study.	
Life Cycle Assessment (LCA)	
LCA accountability: Randall Waymire and Manasa Rao; WAP Sustainability Consulting	
Third-party verification	
Independent third-party verification of the declaration and data, according to ISO 14025:2006, via: ☒ EPD verification by individual verifier ☐ INTERNAL ☒ EXTERNAL	Third-party verifier: James Mellentine, Thrive ESG Approved by: The International EPD System
Procedure for follow-up of data during EPD validity involves third party verifier: ☐ Yes ☒ No	

[1] This EPD is based on a PCR that satisfies procurement rules at the federal, state, and municipal levels which call for EPDs based on the Construction Products PCR 2019: 14, Version 1.3.4. The Construction Products PCR 2019: 14, Version 1.3.4 was used to meet regulatory (example: Buy Clean California Act, etc.) and market expectations (example: Building Transparency EC3 comparisons, LEED and existing vendor procurement requirements, product scoring programs, etc.). The EPD should not be used outside of this context.

The EPD owner has the sole ownership, liability, and responsibility for the EPD.

EPDs within the same product category but registered in different EPD programme, or not compliant with EN 15804 or ISO 21930, 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 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 characterization factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see EN 15804, ISO 21930, and ISO 14025.

Company information

Owner of the EPD: Schluter Systems

Contact: Daniel Marvin. sustainability@schluter.com

Description of the organization: Schluter Systems is a manufacturer and distributor of products designed to make the installation of ceramic tile and stone easier and longer-lasting. Schluter has four locations in North America: Plattsburgh, New York; Reno, Nevada; Dallas-Fort Worth, Texas; and Montréal, Québec, as well as six European offices, including its main headquarters in Iserlohn, Germany. With over 2500 employees across the globe, Schluter Systems is dedicated to creating innovative solutions for the tile industry, and working closely with its network of distributors, dealers, tile contractors, architects, specifiers and other members of the building and construction industry.

Product-related or management system-related certifications:

- VOC Certificate
- HPD

Location of production site(s): North America

Product information

Product name: DITRA Uncoupling membrane.

Product identification: CSI division 09 30 00, UN CPC: 54699

Product description: DITRA Uncoupling Membrane uncouples a tile or stone installation from the substrate to minimize the potential for cracks and moisture issues. The membrane is a polyethylene membrane with a grid structure of square cavities, each cut back in a dovetail configuration, and an anchoring fleece laminated to its underside. Schluter DITRA is bonded to the substrate using thin-set mortar. The anchoring fleece on the underside of Schluter DITRA is fully engaged in the mortar to provide a mechanical bond to the substrate. Tile is installed over Schluter DITRA using the thin-bed method in such a way that the mortar becomes mechanically anchored in the square, cutback cavities of the Schluter DITRA matting.

Table 1: Technical Details

Item	Ditra Uncoupling Membrane	Units
Width	0.995	m
Length	5 - 30	m
Thickness	3.5	mm
ANSI A118.10	Comply	-

LCA information

Declared unit: One (1) m^2 of uncoupling membrane for the reference service life of 75 years.

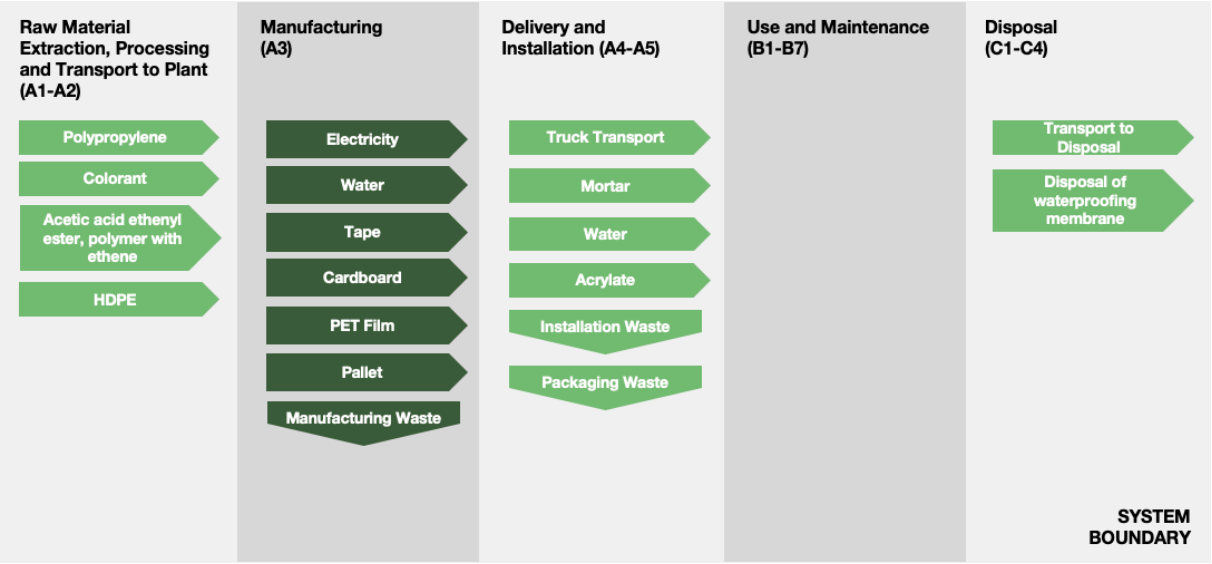
Reference service life: 75 years.

Time representativeness: Primary data were provided by the manufacturer and represent all information for calendar year 2022.

Database(s) and LCA software used: MLC (Managed LCA Content) Database 2023.2 and LCA FE (Life Cycle Assessment for Experts) 10.7.1.28 software.

Description of system boundaries: Cradle-to-grave, modules A1-A5, modules B1-B7, modules C1–C4, and module D.

System diagram:



Manufacturing:
DITRA Uncoupling Membrane is made by extruding polypropylene sheets into a grid pattern with a scrim bonded to the bottom. The matting is treated for compatibility with thin-set mortars. The membranes are then cut to desired dimensions and packaged using cardboard and tape, which is then palletized and covered with shrink wrap for protection.

Energy resources used in the manufacturing process are accounted for in the model.

Electricity: The electricity is sourced from the power grid, and no onsite electricity generation is used. A custom residual grid mix was created to comply with modelling requirements of the PCR. The climate impact of the created grid mix is 0.184 kg CO_2 eq./kWh.

Table 2: Residual Grid Mix - Ontario

Energy Source	Grid Mix %	Residual Grid Mix %
Biogas	0.00%	0.00%

Energy Source	Grid Mix %	Residual Grid Mix %
Biomass	0.00%	0.00%
Coal Gas	0.00%	0.00%
Geothermal	0.00%	0.00%
Hard Coal	10.46%	15.83%
Heavy Fuel Oil (HFO)	0.00%	0.00%
Hydroelectric	23.79%	0.00%
Lignite	0.00014%	0.00021%
Natural Gas	0.00%	0.00%
Nuclear	55.62%	84.17%
Peat	0.00%	0.00%
Photovoltaics	1.66%	0.00%
Solar Thermal	0.00%	0.00%
Wind	8.47%	0.00%
Waste to Energy	0.00%	0.00%
Grid Losses	5.26%	5.26%

Manufacturing inputs and outputs per declared unit were calculated by using annual figures and dividing them by annual production. Packaging materials are also included in the model in this stage with the values being calculated via direct measurement.

Assumptions: Throughout this study, value choices and judgements that may have affected the LCA have been described. Additional decisions are summarized below:

- The inclusion of overhead energy data was determined appropriate due to the inability to sub-meter and isolate manufacturing energy from overhead energy.
- The use and selection of secondary datasets from MLC – The selection of which generic dataset to use to represent an aspect of a supply chain is a significant value choice. Collaboration between the LCA practitioner, the manufacturer, and MLC data experts was invaluable in determining best-case scenarios in the selection of data. However, no generic data can be a perfect fit. Improved supply chain specific data would improve the accuracy of results, however budgetary and time constraints also must be considered.

Cut-off Rules: The cut-off criteria did not exceed 1 % of renewable and non-renewable primary energy usage and 1 % of the total mass input of that unit process. The total of neglected input flows per module, e.g. per module A1-A3, A4-A5, B1-B5, B6-B7, C1-C4 and module D are less than 5 % of energy usage and mass. There are no hazardous or toxic substances that have been knowingly excluded from the study.

The list of excluded materials and energy inputs include:

- As the tools used during the installation of the DITRA Uncoupling membranes are multi-use tools and can be reused after each installation, the per-declared unit impacts are considered negligible and therefore are not included.
- Some material inputs may have been excluded within the MLC datasets used for this project. All MLC datasets have been critically reviewed and conform to the exclusion requirement of the PCR, Construction Products PCR 2019: 14, Version 1.3.4.

Data Quality:

Geographic Coverage: The geographical scope of the manufacturing portion of the life cycle is North America. All primary data were collected from the manufacturer. The geographic coverage of primary data is considered good.
The geographical scope of the raw material acquisition is the United States and Canada. Customer distribution, site installation, and use portions of the life cycle is within North America. Overall geographic data quality is considered good.

Time Coverage: Primary data were provided by the manufacturer and represent all information for calendar year 2022. Using this data meets the PCR requirements. Time coverage of this primary data is considered excellent.

Technological Coverage: Primary data provided by the manufacturer is specific to the technology the company uses in manufacturing their product. It is site-specific and considered of good quality. It is worth noting that the energy and water used in manufacturing the product includes overhead energy such as lighting, heating, and sanitary use of water. Sub-metering was not available to extract process-only energy and water use from the total energy use. Sub-metering would improve the technological coverage of data quality.

Allocation: General principles of allocation were based on ISO 14040/44. There are no products other than the product under study that are produced as part of the manufacturing processes. Since there are no co-products, no allocation based on co-products is required. Any waste generated at manufacturing would have been treated as co-products. However, at manufacturing there was no waste sent to recycling, any waste produced was sent to incineration so co-product allocation wasn't necessary for this study.
To derive a per-unit value for manufacturing inputs such as electricity, allocation based on total production by mass was adopted. As a default, secondary MLC datasets use a physical basis for allocation.

Modules declared, 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	X	X	X	X	X	X	X	X	X	X	X	X
Geography	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Share of specific data	23%			-	-	-	-	-	-	-	-	-	-	-	-	-	-

Content information

All values are reported according to the declared unit of one square meter of uncoupling membrane. No substances included in the Candidate List of Substances of Very High Concern for authorization under REACH Regulations are present in Schluter Systems membranes, either above the threshold for registration with the European Chemicals Agency or above 0.1% (wt./wt).

Table 3: Material Composition per declared unit

Material	Weight, kg	Mass %
Polypropylene	0.071	13.2%
Colorant	0.010	1.85%
HDPE	0.454	84.9%

Packaging Information

The membranes are packaged using cardboard and tape, which is then palletized and covered with shrink wrap for protection. Packaging waste disposal have been modeled as per guidelines in US EPA Waste Disposal Pathways.

Table 4: Packaging

Packaging materials	DITRA uncoupling membrane Weight, kg	Weight biogenic carbon, kg C/kg
Cardboard	3.58E-02	0.55 kg C/kg
Tape	7.32E-04	N/A

Packaging materials	DITRA uncoupling membrane Weight, kg	Weight biogenic carbon, kg C/kg
PET Film	1.22E-02	N/A
Wooden Pallet	4.17E-02	0.41 kg C/kg
TOTAL	9.04E-02	0.96 kg C/kg
Biogenic Carbon in Packaging (kg C/Declared Unit)	3.68E-02	N/A

Post-Factory Gate Scenario Development

A4 (Delivery to Installation Site) Scenario Per Declared Unit

The product is delivered to the customer via truck. Transportation averages are calculated based on sales records.

Table 5: Transport to building site (A4)

Distribution Details	DITRA Uncoupling Membrane
Vehicle Type	Heavy-duty Diesel Truck / 53,333 lb payload - 8b
Fuel Efficiency [L/100km]	42
Fuel Type	Diesel
Distance [km]	805
Capacity Utilization [%]	67%
Weight of Products Transported [kg]	0.63
Capacity utilization volume factor	1

A5 (Construction) Scenario Per Declared Unit

DITRA is embedded with a DITRA trowel into thin-set mortar. If being used as a waterproof membrane, seams and protrusions must be treated with other Schluter products. Tile or stone is installed on top of the DITRA with the thin-bed method taking care to fill in the cavities in the membrane with mortar. Follow manufacturer's instructions to ensure proper results.

Installation equipment is required, and the ancillary installation materials are included. However, the manufacturing of the installation equipment is not included in the study as these are multi-use tools and the impacts per declared unit are considered negligible. Packaging and installation waste disposal have been modeled as per guidelines in US EPA Waste Disposal Pathways.

Table 6: Installation Materials

Construction Phase End of Life Fates	DITRA Uncoupling Membrane
Mortar [kg/m^2]	2.12
Water [kg/m^2]	0.21
Product waste at install [kg/m^2]	0.054
TOTAL Installation Waste to Landfill [kg/m^2]	***0.084***

B1-B7 (Use) Scenario Per Declared Unit

DITRA Uncoupling membranes do not require any inputs or energy for maintenance. Once installed, they lie below tile flooring protecting the substrate from any damage due to moisture or leakage.
These membranes typically last as long as the building (75 years) and generally don't need to be replaced unless they are damaged or not installed as per manufacturer guidelines.

C1-C4 (Product End of Life) Scenario Per Declared Unit
The product is either disposed of with the underlying floor and/or substrate or manually removed via scraping. Table 7 shows the parameters for the end-of-life scenario utilized in the model. The product is assumed to be landfilled at end of life. Waste has been classified according to Resource Conservation and Recovery Act (RCRA), Subtitle 3 for North American region.

Table 7. End-of-Life Scenario Details (C1-C4)

Distribution Details	DITRA Uncoupling Membrane
Collected as mixed construction waste [kg]	2.65
Waste to Landfill [kg]	2.65
Distance to Landfill [km]	161
Transport Type	US: Truck - Heavy-duty Diesel Truck 53,333 lb. payload

Module D (Benefits and Loads Beyond the System Boundary) Scenario Per Declared Unit
As the products are landfilled at the end of life, there are no impacts or benefits beyond the system boundary.

Impact Category Details

Impact Category	Acronym	Unit
EN 15804 +A2 (based on EF 3.1)		
Climate change - total	GWP_{CCT}	kg CO_2 eq
Climate change – fossil	GWP_{CCF}	kg CO_2 eq
Climate change - biogenic	GWP_{CCB}	kg CO_2 eq
Climate change – land use, Land use change	$GWP_{CCLULUC}$	kg CO_2 eq
Depletion of stratospheric ozone layer	ODP	kg CFC 11 eq
Acidification potential of soil and water	AP	kg Mol H+
Eutrophication potential – aquatic freshwater	EP_{AF}	kg Phosphate eq
Eutrophication potential – aquatic Marine	EP_{AM}	kg N eq
Eutrophication potential - terrestrial	EP_T	Mol N eq
Photochemical ozone creation potential	POCP	kg Ethene eq
Abiotic depletion potential for non-fossil resources	ADP_M	kg Sb eq
Abiotic depletion potential for fossil resources	ADP_F	MJ, net calorific value
TRACI 2.1 and GWP-GHG		
Acidification potential of soil and water	AP	kg SO_2 eq.
Eutrophication potential	EP	kg N eq.
Fossil GHG emissions	GWP-GHG	kg CO_2 eq
Ozone depletion of air	ODP	kg CFC-11 eq.
Smog formation potential	SFP	kg O_3 eq.
Additional impact categories		
Particulate matter	PM	Disease incidence
Ionising radiation, human health	IR	kBq U235 eq.
Ecotoxicity, freshwater	ET	CTUe
Human toxicity, cancer	HT (Cancer)	CTUh
Human toxicity, non-cancer	HT (Non-Cancer)	CTUh
Soil quality	SQ	-
Biogenic Carbon Indicators		
Biogenic Carbon Removal from Product	BCRP	kg CO_2 eq.
Biogenic Carbon Emission from Product	BCEP	kg CO_2 eq.
Biogenic Carbon Removal from Packaging	BCRK	kg CO_2 eq.
Biogenic Carbon Emission from Packaging	BCEK	kg CO_2 eq.
Biogenic Carbon Emission from Combustion of Waste from Renewable Sources Used in Production Processes	BCEW	kg CO_2 eq.
Calcination Carbon Emissions	CCE	kg CO_2 eq.
Carbonation Carbon Removals	CCR	kg CO_2 eq.
Carbon Emissions from Combustion of Waste from Non- Renewable Sources used in Production Processes	CWNR	kg CO_2 eq.
Resource Use Indicators		
Use of renewable primary energy	PERE	MJ LHV
Use of renewable primary energy as materials	PERM	MJ LHV
Total use of renewable primary energy resources	PERT	MJ LHV
Use of non-renewable primary energy	PENRE	MJ LHV

Impact Category	Acronym	Unit
Use of non-renewable primary energy as materials	PENRM	MJ LHV
Total use of non-renewable primary energy resources	PENRT	MJ LHV
Secondary materials	SM	kg
Renewable secondary fuels	RSF	MJ
Non-renewable secondary fuels	NRSF	MJ
Recovered energy	RE	MJ
Net use of fresh water	FW	m^3
Waste and Output Flow Indicators		
Hazardous waste disposed	HWD	kg
Non-hazardous waste disposed	NHWD	kg
Radioactive Waste deposited	RWD	kg
High-level radioactive waste	HLRW	kg
Intermediate- and low-level radioactive waste, conditioned, to final repository	ILLRW	kg
Components for reuse	CRU	kg
Materials for recycling	MFR	kg
Materials for energy recovery	MER	kg
Exported electrical energy	EEE	MJ
Exported thermal energy	EET	MJ

The primary energy resources used as raw materials were calculated by multiplying the mass of each material of the product and packaging content with the lower calorific value (MJ/kg) of the material. Specifically, option B within Annex 3 of the PCR (EPD International, 2022) was utilized for these calculations, whereby the energy used as raw material is declared as an input to the module where it enters the product system and as an output from the product system if it exits the product system as useful energy.

Results of the environmental performance indicators

Mandatory impact category indicators according to Construction Products PCR 2019: 14, Version 1.3.4

Table 8. LCIA results for DITRA Uncoupling Membrane, per declared unit (m^2)

Impact Category	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
EN 15804 +A2 (based on EF 3.1)															
ODP	1.05E-11	4.94E-15	2.68E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.52E-15	0.00E+00	1.40E-13	0.00E+00
AP	3.82E-03	1.99E-04	3.33E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E-04	0.00E+00	3.70E-04	0.00E+00
EP_{AF}	6.67E-06	1.98E-07	1.47E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.81E-07	0.00E+00	7.46E-05	0.00E+00
EP_{AM}	1.24E-03	1.00E-04	1.03E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.46E-05	0.00E+00	9.27E-05	0.00E+00
EP_{T}	1.35E-02	1.11E-03	1.13E-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	6.03E-04	0.00E+00	1.01E-03	0.00E+00
POCP	3.85E-03	2.04E-04	3.06E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E-04	0.00E+00	2.81E-04	0.00E+00
ADP_{M}	1.82E-07	2.64E-09	9.31E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.42E-09	0.00E+00	3.47E-09	0.00E+00
ADP_{F}	5.64E+01	5.28E-01	2.40E+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	4.84E-01	0.00E+00	9.42E-01	0.00E+00
GWP_{CCT}	1.32E+00	4.04E-02	2.23E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.69E-02	0.00E+00	6.23E-02	0.00E+00
GWP_{CCF}	1.46E+00	4.03E-02	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	3.68E-02	0.00E+00	6.07E-02	0.00E+00
GWP_{CCB}	-1.37E-01	2.59E-05	-1.55E-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	2.38E-05	0.00E+00	1.53E-01	0.00E+00
$GWP_{CCLULUC}$	2.71E-04	4.58E-05	1.55E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.19E-05	0.00E+00	2.27E-05	0.00E+00
IPCC AR5 Impacts															
GWP_{in}	1.32E+00	4.04E-02	1.60E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.69E-02	0.00E+00	6.23E-02	0.00E+00
GWP_{ex}	1.47E+00	4.04E-02	1.62E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.69E-02	0.00E+00	6.08E-02	0.00E+00
TRACI 2.1 and GWP-GHG															
AP	3.43E-03	1.86E-04	3.01E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.03E-04	0.00E+00	3.18E-04	0.00E+00
EP	3.06E-04	1.65E-05	3.52E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E-05	0.00E+00	5.09E-04	0.00E+00
GWP-GHG	1.46E+00	4.03E-02	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	3.68E-02	0.00E+00	6.07E-02	0.00E+00
ODP	1.31E-11	1.04E-16	1.34E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.53E-17	0.00E+00	2.95E-15	0.00E+00
SFP	7.56E-02	4.30E-03	6.38E-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	2.35E-03	0.00E+00	5.80E-03	0.00E+00
Carbon Emissions and Uptake															
BCRP	5.18E-04	0.00E+00	5.18E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BCEP	0.00E+00	0.00E+00	5.84E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.84E-02	0.00E+00
BCRK	1.22E-01	0.00E+00	3.22E-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
BCEK	0.00E+00	0.00E+00	1.54E-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

Impact Category	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
BCEW	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CCE	0.00E+00	0.00E+00	6.35E-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
CCR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CWNR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table 9: Additional LCIA results for DITRA, per Declared unit (m2)

Impact Category	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Additional impact categories and indicators															
PM	4.22E-08	1.99E-09	2.42E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-09	0.00E+00	4.16E-09	0.00E+00
IR	3.61E-01	1.37E-04	8.47E-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	1.26E-04	0.00E+00	1.02E-03	0.00E+00
ET	1.45E+01	4.42E-01	7.28E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.05E-01	0.00E+00	4.17E+00	0.00E+00
HT (Cancer)	1.83E-09	1.03E-11	5.56E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.38E-12	0.00E+00	6.39E-11	0.00E+00
HT (Non-Cancer)	8.49E-09	1.67E-10	9.58E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-10	0.00E+00	6.86E-09	0.00E+00
SQ	2.31E+00	9.95E-02	2.93E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.11E-02	0.00E+00	8.02E-02	0.00E+00

Table 10. Resource use, waste, and, output flow results for DITRA Uncoupling Membrane, per declared unit (m^2)

Impact Category	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Resource Use Indicators															
PERE	2.25E+00	2.26E-02	2.05E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.07E-02	0.00E+00	1.12E-01	0.00E+00
PERM	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	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	2.25E+00	2.26E-02	2.05E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.07E-02	0.00E+00	1.12E-01	0.00E+00
PENRE	3.32E+01	5.67E-01	2.19E+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	5.19E-01	0.00E+00	9.59E-01	0.00E+00
PENRM	2.42E+01	0.00E+00	2.42E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	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	5.74E+01	5.67E-01	2.44E+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	5.19E-01	0.00E+00	9.59E-01	0.00E+00
SM	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	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	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	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	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	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	8.19E-03	7.75E-05	1.15E-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	7.10E-05	0.00E+00	1.19E-04	0.00E+00
Output Flows and Waste Categories															
HWD	2.89E-07	1.63E-12	2.99E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.49E-12	0.00E+00	2.39E-11	0.00E+00
NHWD	3.26E-02	4.93E-05	4.21E-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	4.52E-05	0.00E+00	2.85E+00	0.00E+00
RWD	4.50E-03	1.62E-06	1.03E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.49E-06	0.00E+00	1.06E-05	0.00E+00
HLRW	5.39E-06	1.93E-09	1.23E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.77E-09	0.00E+00	1.19E-08	0.00E+00
ILLRW	4.49E-03	1.62E-06	1.03E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.49E-06	0.00E+00	1.06E-05	0.00E+00
CRU	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	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	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MER	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	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	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EET	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	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 environmental information

Environmental Activities and Certifications

Schluter's DITRA Uncoupling Membrane has the following certifications:

- VOC Certificate
- HPD

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