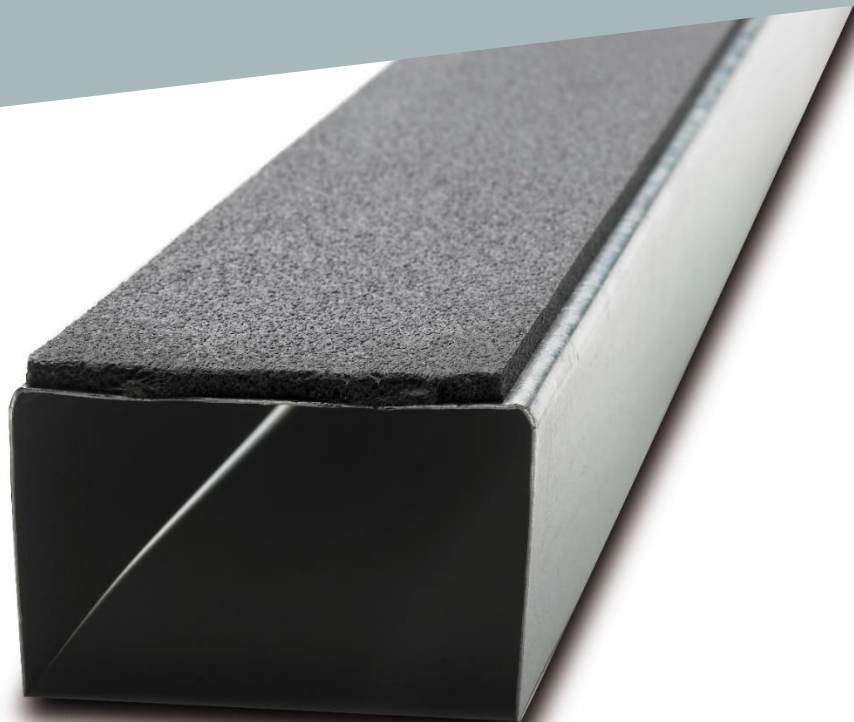


Owner: Triplan International A/S  
No.: MD-20041-EN  
Issued: 24-06-2021  
Valid to: 24-06-2026

3<sup>rd</sup> PARTY VERIFIED

**EPD**

VERIFIED ENVIRONMENTAL PRODUCT DECLARATION | ISO 14025 & EN 15804



**Owner of declaration**

Triplan International A/S  
 Industriskellet 12, DK-2635 Ishøj  
 VAT No.: 16664081



**Issued:**  
24-06-2021

**Valid to:**  
24-06-2026

**Programme**

EPD Danmark  
 www.epddanmark.dk



**Basis of calculation**

This EPD is developed in accordance with the European standard EN 15804+A1.

**Comparability**

EPDs of construction products may not be comparable if they do not comply with the requirements in EN 15804. EPD data may not be comparable if the datasets used are not developed in accordance with EN 15804 and if the background systems are not based on the same database.

**Validity**

This EPD has been verified in accordance with ISO 14025 and is valid for 5 years from the date of issue.

**Use**

The intended use of an EPD is to communicate scientifically based environmental information for construction products, for the purpose of assessing the environmental performance of buildings.

**EPD type**

- Cradle-to-gate
- Cradle-to-gate with options
- Cradle-to-grave

**Declared product**

Polyethylene mat for application on steel building profiles

Number of declared datasets/product variations: 1

**Production site**

Triplan International A/S, Industriskellet 12, DK-2635 Ishøj

**Product use**

Polyethylene mat glued onto steel building profiles, used for improved tightening and sound-insulation. The mat is mounted directly on the profiles or shipped with a thickness of 4 mm on rolls either 41 mm, 66 mm, 91 mm, or 116 mm wide.

**Declared unit**

1 m<sup>2</sup> polyethylene mat

**Year of data**

2018/2019

CEN standard EN 15804 serves as the core PCR
Independent verification of the declaration and data, according to EN ISO 14025
<input type="checkbox"/> internal <input checked="" type="checkbox"/> external
Third party verifier:  <hr/> Ninkie Bendtsen, Niras A/S



Henrik Fred Larsen  
 EPD Danmark

**Life cycle stages and modules (MND = module not declared)**

Product			Construction process		Use								End of life				Beyond the system boundary
Raw material supply	Transport	Manufacturing	Transport	Installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Re-use, recovery and recycling potential	
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D	
<b>X</b>	<b>X</b>	<b>X</b>	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	

# Product information

## Product description

The main product components of Triplans polyethylene mat are shown in the table below, including the adhesive used to mount the mat.

Material	Weight-% of declared product
Polyethylene foam	70,5%
Adhesive	29,5%

## Representativity

The declared unit is 1 m<sup>2</sup> of polyethylene mat glued onto steel building profiles, based on the production at Triplans manufacturing site in Ishøj, Denmark. The calculations are based on consumption- and production data from October 2018 to September 2019.

Background data is based on the GaBi databases version 2020. The majority of datasets are <5 years old, and all the used datasets are <10 years old in accordance with EN15804:2012+A1:2013

## Picture of product(s)



## Hazardous substances

The products covered in this EPD do not contain substances listed in the "Candidate List of Substances of Very High Concern for authorisation".

(<http://echa.europa.eu/candidate-list-table>)

## Essential characteristics (CE)

The polyethylene mat is not covered by harmonised technical specifications.

Further technical information can be obtained by contacting the manufacturer or on the manufacturers' website:

<https://www.triplan.dk/en>

## Reference Service Life (RSL)

No RSL is declared, as this EPD is based on a cradle-to-gate LCA.

# LCA background

## Declared unit

The LCI and LCIA results in this EPD relates to 1 m<sup>2</sup> polyethylene mat glued onto steel building profiles.

Name	Value	Unit
Declared unit	1	m <sup>2</sup>
Density	0,122	kg/m <sup>2</sup>
Conversion factor to 1 kg.	8,197	-

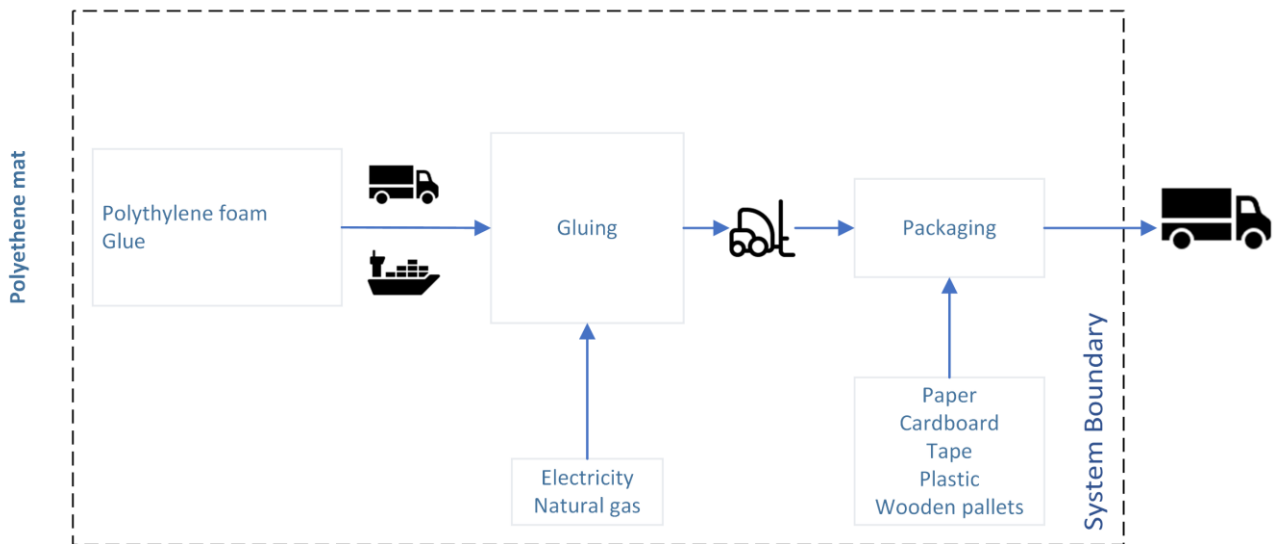
## Functional Unit

Not defined

## PCR

This EPD is developed according to the core rules for the product category of construction products in EN 15804:2012+A1:2013.

## Flowdiagram



## System boundary

This EPD is based on a cradle-to-gate LCA, in which 100 weight-% has been accounted for.

The general rules for the exclusion of inputs and outputs follows the requirements in EN 15804, 6.3.5, where the total of neglected input flows per module shall be a maximum of 5 % of energy usage and mass and 1 % of energy usage and mass for unit processes.

### Product stage (A1-A3) includes:

A1 – Extraction and processing of raw materials

A2 – Transport to the production site

A3 – Manufacturing processes

Triplan uses an extruded polyethylene mat that is attached to steel building profiles with an adhesive, in order to achieve a better seal and greater sound insulation. The mat is based on a 4 mm thick layer of polyethylene foam and is mounted in between the steel rails and posts.

The product stage comprises the acquisition of all raw materials, products and energy, transport to the production site, packaging and waste processing up to the "end-of-waste" state or final disposal. The LCA results are declared in aggregated form for the product stage, which means, that the sub-modules A1, A2 and A3 are declared as one module A1-A3.

The production of energy, resulting from the disposal of waste in municipal waste incineration, is allocated within the system boundary, and the generated thermal- and electrical energy is deducted from the consumption.

### Construction process stage (A4-A5) includes:

Modules not declared.

### Use stage (B1-B7) includes:

Modules not declared.

### End of Life (C1-C4) includes:

Modules not declared.

### Re-use, recovery and recycling potential (D) includes:

Module not declared.

# LCA results

ENVIRONMENTAL IMPACTS PER m2 POLYETHYLENE MAT		
Parameter	Unit	A1-A3
GWP	[kg CO <sub>2</sub> eq.]	5,68E-01
ODP	[kg CFC11 eq.]	5,62E-15
AP	[kg SO <sub>2</sub> eq.]	8,70E-04
EP	[kg (PO <sub>4</sub> ) <sup>3-</sup> eq.]	1,29E-04
POCP	[kg Ethen eq.]	1,32E-04
ADPE	[kg Sb eq.]	9,73E-08
ADPF	[MJ]	1,60E+01
Caption	GWP = Global warming potential; ODP = Ozone depletion potential; AP = Acidification potential of soil and water; EP = Eutrophication potential; POCP = Photochemical ozone creation potential; ADPE = Abiotic depletion potential for non fossil resources; ADPF = Abiotic depletion potential for fossil resources	

RESSOURCE USE PER m2 POLYETHYLENE MAT		
Parameter	Unit	A1-A3
PERE	[MJ]	1,80E+00
PERM	[MJ]	4,58E+00
PERT	[MJ]	6,83E+00
PENRE	[MJ]	1,11E+01
PENRM	[MJ]	5,79E+00
PENRT	[MJ]	1,69E+01
SM	[kg]	0,00E+00
RSF	[MJ]	0,00E+00
NRSF	[MJ]	0,00E+00
FW	[m <sup>3</sup> ]	2,86E-03
Caption	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 resources; 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 CATEGORIES AND OUTPUT FLOWS PER m2 POLYETHYLENE MAT		
Parameter	Unit	A1-A3
HWD	[kg]	1,98E-08
NHWD	[kg]	7,03E-03
RWD	[kg]	3,23E-04
CRU	[kg]	0,00E+00
MFR	[kg]	2,00E-02
MER	[kg]	0,00E+00
EEE	[MJ]	0,00E+00
EET	[MJ]	0,00E+00
Caption	HWD = Hazardous waste disposed; NHWD = Non hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy	

## Additional information

### Indoor air

*The EPD does not give information on release of dangerous substances to indoor air because the horizontal standards on measurement of release of regulated dangerous substances from construction products using harmonised test methods according to the provisions of the respective technical committees for European product standards are not available.*

### Soil and water

*The EPD does not give information on release of dangerous substances to soil and water because the horizontal standards on measurement of release of regulated dangerous substances from construction products using harmonised test methods according to the provisions of the respective technical committees for European product standards are not available.*

# References

<b>Publisher</b>	 <a href="http://www.epddanmark.dk">www.epddanmark.dk</a>
<b>Programme operator</b>	Danish Technological Institute Buildings & Environment Gregersensvej DK-2630 Taastrup <a href="http://www.teknologisk.dk">www.teknologisk.dk</a>
<b>LCA-practitioner</b>	Danish Technological Institute Buildings & Environment Gregersensvej DK-2630 Taastrup <a href="http://www.teknologisk.dk">www.teknologisk.dk</a>
<b>LCA software /background data</b>	Thinkstep GaBi 10.0 2020 incl. databases <a href="http://www.gabi-software.com">www.gabi-software.com</a>
<b>3<sup>rd</sup> party verifier</b>	Ninkie Bendtsen, NIRAS, Sortemosevej 19, 3450 Allerød <a href="https://www.niras.com/">https://www.niras.com/</a>

## General programme instructions

Version 2.0  
[www.epddanmark.dk](http://www.epddanmark.dk)

### EN 15804

DS/EN 15804:2012 + A1:2013 - "Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products"

### EN 15942

DS/EN 15942:2011 – " Sustainability of construction works – Environmental product declarations – Communication format business-to-business"

### ISO 14025

DS/EN ISO 14025:2010 – " Environmental labels and declarations – Type III environmental declarations – Principles and procedures"

### ISO 14040

DS/EN ISO 14040:2008 – " Environmental management – Life cycle assessment – Principles and framework"

### ISO 14044

DS/EN ISO 14044:2008 – " Environmental management – Life cycle assessment – Requirements and guidelines"