

# Environmental product declaration

in accordance with ISO 14025 and EN 15804+A2

3110 Unifix



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**mira**  
byggeprodukter a/s

EPD-Global

**Owner of the declaration:**

Mira Byggeprodukter AS

**Product:**

3110 Unifix

**Declared unit:**

1 kg

**This declaration is based on Product Category Rules:**

CEN Standard EN 15804:2012+A2:2019 serves as core PCR

NPCR 009:2021 Part B for Technical - Chemical products for building and construction industry

**Program operator:**

EPD-Global

**Declaration number:**

NEPD-14694-15364

**Issue date:**

23.01.2026

**Valid to:**

23.01.2031

**EPD software:**

LCAno EPD generator ID: 1187555

## General information

**Product**

3110 Unifix

**Program operator:**

EPD-Global  
Post Box 5250 Majorstuen, 0303 Oslo, Norway  
Phone: +47 977 22 020  
web: [www.epd-global.com](http://www.epd-global.com)

**Declaration number:**

NEPD-14694-15364

**This declaration is based on Product Category Rules:**

CEN Standard EN 15804:2012+A2:2019 serves as core PCR  
NPCR 009:2021 Part B for Technical - Chemical products for building  
and construction industry

**Statement of liability:**

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

**Declared unit:**

1 kg 3110 Unifix

**Declared unit with option:**

A1-A3, A4, A5, C1, C2, C3, C4, D

**Functional unit:**

Not declared

**General information on verification of EPD from EPD tools:**

Independent verification of data, other environmental information  
and the declaration according to ISO 14025:2010, § 8.1.3 and § 8.1.4.  
Verification of each EPD is made according to EPD-Global's guidelines  
for verification and approval requiring that tools are i) integrated into  
the company's environmental management system, ii) the procedures  
for use of the EPD tool are approved by EPD-Global, and iii) the  
process is reviewed annually by an independent third party verifier.  
See Appendix G of EPD-Global's General Programme Instructions for  
further information on EPD tools

**Verification of EPD tool:**

Independent third party verification of the EPD tool, background data  
and test-EPD in accordance with EPD-Global's procedures and  
guidelines for verification and approval of EPD tools. NEPD73

Third party verifier:

Linda Høbye, Life Cycle Assessment Consulting

(no signature required)

**Owner of the declaration:**

Mira Byggeprodukter AS  
Contact person: Thomas Blomdell  
Phone: +45 46191946  
e-mail: [info@mira.eu.com](mailto:info@mira.eu.com)

**Manufacturer:**

Mira Byggeprodukter AS  
Egegårdsvej 2  
4621 Gadstrup, Denmark

**Place of production:**

Mira - Production Site (Denmark)  
Egegårdsvej, 2  
4621 Gadstrup, Denmark

**Management system:****Organisation no:**

39581914

**Issue date:**

23.01.2026

**Valid to:**

23.01.2031

**Year of study:**

2024

**Comparability:**

EPD of construction products may not be comparable if they not  
comply with EN 15804 and seen in a building context.

**Development and verification of EPD:**

The declaration is created using EPD tool lca.tools ver EPD2022.03,  
developed by LCA.no. The EPD tool is integrated in the company's  
management system, and has been approved by EPD-Global.  
NEPD189

Developer of EPD: Niklas Frøberg

Reviewer of company-specific input data and EPD: Thomas Blomdell

**Approved:**

Håkon Hauan, CEO EPD-Global

## Product

### Product description:

3110 Unifix is based on white low-alkaline cement, which is easy to work with on the substrate and allows for easy cleaning of tools. Suitable for transparent natural stone and glass mosaic. High load-bearing capacity ensures slip-free wall installation.

### Product specification

- Substrates with moderate shrinkage/deformation
- All types of ceramic tiles, natural stone, and glass mosaic
- Classification C2TE S1 flexible
- Dust-reduced

Materials	kg	%
Additives	0.0003299	0.03299
Aggregate	0.5196	51.96
Cement	0.3794	37.94
Chemical	0.01732	1.73
Mineral	0.05773	5.77
Oil	0.005047	0.5047
Polymer - Unspecified	0.02062	2.06
Total	1.00	100.00

Packaging	kg	%
Packaging - Paper	0.01	27.71
Packaging - Wood	0.02	72.29
Total incl. packaging	1.02	100.00

### Technical data:

Density	1450 kg/m <sup>3</sup>
Product properties according to EN 12004	C2TE S1
Open time	approx. 6 hours
Drying time at 18°C	10–18 hours
Fully cured after	7 days
Suitable working temperature	10–25°C
Average consumption for walls	2.5 kg/m <sup>2</sup>
Average consumption for floors	3.5 kg/m <sup>2</sup>

### Market:

European market

### Reference service life, product

Not applicable

### Reference service life, building

## LCA: Calculation rules

### Declared unit:

1 kg 3110 Unifix

### Cut-off criteria:

All major raw materials and all the essential energy is included. The production processes for raw materials and energy flows with very small amounts (less than 1%) are not included. These cut-off criteria do not apply for hazardous materials and substances.

### Allocation:

The allocation is made in accordance with the provisions of EN 15804. Incoming energy and water and waste production in-house is allocated equally among all products through mass allocation. Effects of primary production of recycled materials is allocated to the main product in which the material was used. The recycling process and transportation of the material is allocated to this analysis.

### Data quality:

Specific data for the product composition are provided by the manufacturer. The data represent the production of the declared product and were collected for EPD development in the year of study. Background data is based on EPDs according to EN 15804 and different LCA databases. The data quality of the raw materials in A1 is presented in the table below.

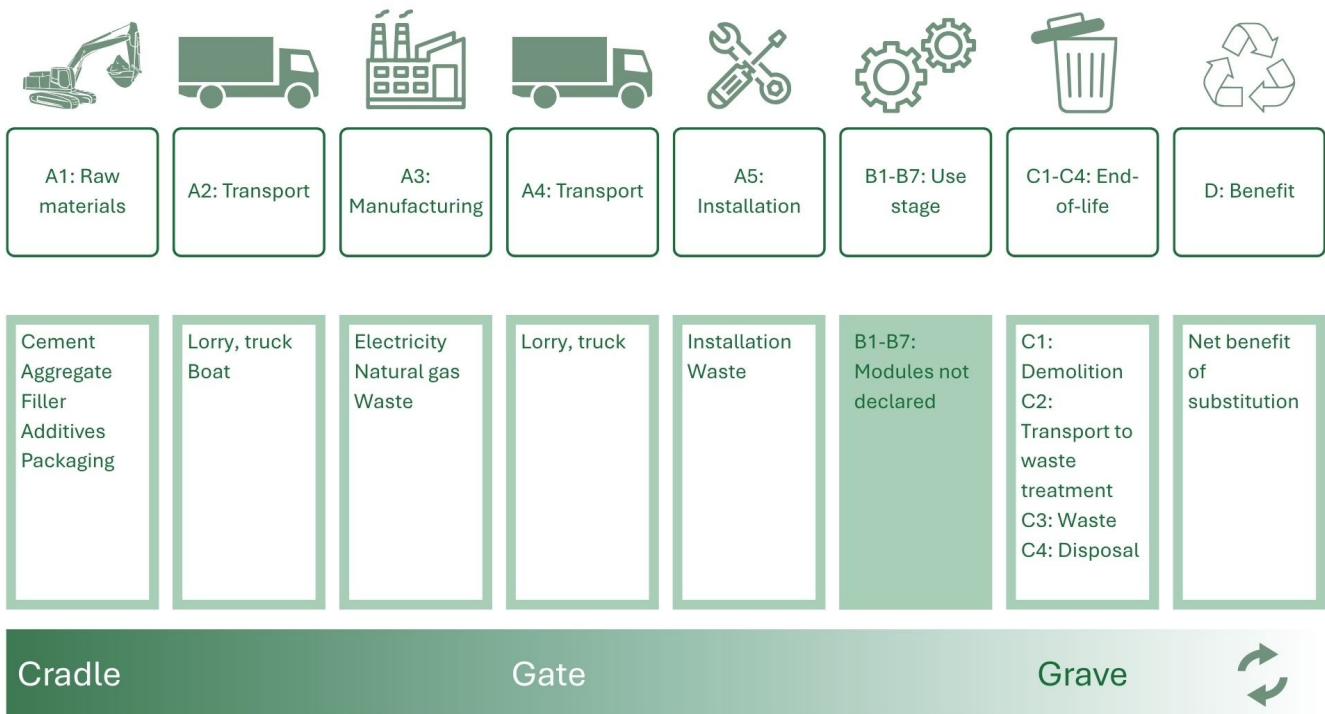
Materials	Source	Data quality	Year
Additives	ecoinvent 3.10.1	Database	2023
Aggregate	ecoinvent 3.10.1	Database	2023
Cement	S-P-02234	EPD	2020
Chemical	ecoinvent 3.10.1	Database	2023
Mineral	ecoinvent 3.10.1	Database	2023
Oil	ecoinvent 3.10.1	Database	2023
Packaging - Paper	ecoinvent 3.10.1	Database	2023
Packaging - Wood	ecoinvent 3.10.1	Database	2023
Polymer - Unspecified	ecoinvent 3.10.1	Database	2023

### System boundaries (X=included, MND=module not declared, MNR=module not relevant)

Product stage			Construction installation stage		Use stage							End of life stage				Beyond the system boundaries
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
X	X	X	X	X	MND	MND	MND	MND	MND	MND	MND	X	X	X	X	X

#### System boundary:

This EPD covers the life cycle modules A1–A3 (raw material extraction, transport to factory, and production). Modules A4–A5 (transport to storage and further to market with subsequent consumption). B1-B7 (use phase) is not included. C1–C4 (end-of-life phase) and D (potential benefits from recycling) are included. The system boundaries are defined according to EN 15804+A2.



#### Additional technical information:

## LCA: Scenarios and additional technical information














The following information describe the scenarios in the different modules of the EPD.

A4: European market, 90km average. A5: The installation of the product into the building requires water and energy for blending the raw materials. Mixing electricity consumption is estimated as 0,216 MJ/kg. This is equivalent to the use of a 1200-Watt handheld mixer for 3 minutes. Apart from the waste of sales and transport packaging for the final Mira product (paper, plastics), there is a 2% loss of the product generated during installation. The demolition process (C1) is modelled as diesel use in demolition equipment. The diesel consumption is based on a consumption of 10kWh/ton. All end-of-life products are sent to the closest disposal facilities, estimating a transportation distance equal to 50 km via road transport by a Euro 6 lorry of 16-32 metric ton. Module (C3) is considered zero, as no further waste processing for incineration, reuse, recovery or recycling takes place in this analysis. Module (C4) is the disposal of end-of-life products including physical pre-treatment. In this case, the landfill is considered the final disposal method.

Transport from production place to user (A4)	Capacity utilisation (incl. return) %	Distance (km)	Fuel/Energy Consumption	Unit	Value (Liter/tonne)
Truck, 16-32 tonnes, EURO 6 (km)	38.8 %	90.00	0.044	l/tkm	3.96
Assembly (A5)					
Waste, packaging, wood (kg)	kg	0.0167			
Electricity, Denmark (kWh)	kWh	0.06			
Water, tap water (kg)	kg	0.30			
Material loss during installation (kg)	kg	0.02			
Waste, cardboard and paper, to average treatment (kg) - incl. 85 km transp.	kg	0.0064			
De-construction demolition (C1)					
Diesel, burned (MJ)	MJ	0.036			
Transport to waste processing (C2)					
Truck, 16-32 tonnes, EURO 6 (km)	38.8 %	50.00	0.044	l/tkm	2.20
Disposal (C4)					
Treatment of waste concrete-based, inert material landfill (kg)	kg	1.00			
Benefits and loads beyond the system boundaries (D)					
Substitution of electricity (MJ)	MJ	0.000000208			
Substitution of electricity (MJ)	MJ	0.000000034			
Substitution, Packaging, Pallet, EUR wooden pallet, single use (kg)	kg	0.01079			
Substitution of thermal energy, district heating (MJ)	MJ	0.000000033			
Substitution of thermal energy, district heating (MJ)	MJ	0.000000546			

## LCA: Results

The LCA results are presented below for the declared unit defined on page 2 of the EPD document.

Environmental impact										
Indicator		Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
	GWP-total	kg CO <sub>2</sub> -eq	5.73E-01	1.75E-02	5.91E-02	3.61E-03	9.72E-03	0	5.90E-03	1.31E-02
	GWP-fossil	kg CO <sub>2</sub> -eq	6.02E-01	1.75E-02	2.26E-02	3.60E-03	9.71E-03	0	5.88E-03	-2.68E-03
	GWP-biogenic	kg CO <sub>2</sub> -eq	-2.90E-02	1.35E-05	3.64E-02	6.05E-07	7.50E-06	0	1.52E-05	1.58E-02
	GWP-luluc	kg CO <sub>2</sub> -eq	2.76E-04	6.27E-06	4.59E-05	3.69E-07	3.49E-06	0	1.07E-06	-1.36E-05
	ODP	kg CFC11 -eq	5.13E-09	3.68E-10	3.29E-10	5.50E-11	2.05E-10	0	2.19E-10	-3.11E-10
	AP	mol H+ -eq	4.19E-03	3.64E-05	1.45E-04	3.25E-05	2.02E-05	0	3.66E-05	-1.48E-05
	EP-FreshWater	kg P -eq	1.55E-04	1.18E-06	1.01E-05	1.04E-07	6.54E-07	0	2.65E-07	-9.23E-07
	EP-Marine	kg N -eq	8.56E-04	8.73E-06	2.91E-05	1.51E-05	4.85E-06	0	1.57E-05	-4.50E-06
	EP-Terrestrial	mol N -eq	9.31E-03	9.42E-05	3.27E-04	1.65E-04	5.24E-05	0	1.71E-04	-5.05E-05
	POCP	kg NMVOC -eq	3.29E-03	6.05E-05	1.04E-04	4.93E-05	3.36E-05	0	6.92E-05	-2.20E-05
	ADP-minerals&metals <sup>1</sup>	kg Sb-eq	2.25E-06	5.82E-08	3.41E-07	1.29E-09	3.23E-08	0	7.50E-09	-1.54E-08
	ADP-fossil <sup>1</sup>	MJ	6.79E+00	2.46E-01	3.04E-01	4.72E-02	1.37E-01	0	1.47E-01	-4.69E-02
	WDP <sup>1</sup>	m <sup>3</sup>	8.00E-02	1.22E-03	1.87E-02	1.18E-04	6.79E-04	0	5.02E-04	-1.75E-03

GWP-total = Global Warming Potential total; 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







"Reading example: 9.0 E-03 = 9.0\*10<sup>-3</sup> = 0.009"

1. 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

### Remarks to environmental impacts

This EPD might use cement EPDs as input in which the Net approach\* has been applied. See the Data Quality table on page 3.


\*The Net approach excludes the emissions from waste incineration used to produce heat required in the cement manufacturing process.

Additional environmental impact indicators										
Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D	
 PM	Disease incidence	6.94E-09	1.29E-09	6.28E-10	9.25E-10	7.16E-10	0	9.27E-10	-2.70E-10	
 IRP <sup>2</sup>	kgBq U235 -eq	3.39E-02	3.17E-04	4.05E-03	2.09E-05	1.76E-04	0	1.25E-04	-2.81E-04	
 ETP-fw <sup>1</sup>	CTUe	9.97E+00	3.27E-02	2.55E-01	2.60E-03	1.82E-02	0	7.84E-03	-1.25E-02	
 HTP-c <sup>1</sup>	CTUh	1.44E-09	0.00E+00	3.50E-11	0.00E+00	0.00E+00	0	1.00E-12	-1.70E-11	
 HTP-nc <sup>1</sup>	CTUh	6.89E-09	1.84E-10	4.72E-10	6.00E-12	1.02E-10	0	2.20E-11	-3.10E-11	
 SQP <sup>1</sup>	dimensionless	5.15E+00	1.49E-01	3.78E-01	3.30E-03	8.26E-02	0	2.97E-01	-1.41E+00	

PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Potential Soil Quality Index (dimensionless)




"Reading example: 9.0 E-03 = 9.0\*10<sup>-3</sup> = 0.009"

1. 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
2. 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.

Resource use										
Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D	
 PERE	MJ	6.88E-01	4.30E-03	2.45E-01	2.99E-04	2.39E-03	0	3.02E-03	-1.05E-01	
 PERM	MJ	4.06E-01	0.00E+00	-3.20E-01	0.00E+00	0.00E+00	0	0.00E+00	-1.54E-01	
 PERT	MJ	1.09E+00	4.30E-03	-7.54E-02	2.99E-04	2.39E-03	0	3.02E-03	-2.60E-01	
 PENRE	MJ	5.74E+00	2.46E-01	2.83E-01	4.72E-02	1.37E-01	0	1.47E-01	-3.68E-02	
 PENRM	MJ	1.03E+00	0.00E+00	2.02E-02	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	
 PENRT	MJ	6.77E+00	2.46E-01	3.04E-01	4.72E-02	1.37E-01	0	1.47E-01	-3.68E-02	
 SM	kg	6.30E-05	0.00E+00	1.26E-06	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	
 RSF	MJ	8.05E-03	1.44E-06	1.62E-04	5.12E-08	8.02E-07	0	8.73E-07	-5.20E-03	
 NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	-1.75E-08	
 FW	m <sup>3</sup>	4.23E-03	3.35E-05	9.40E-04	3.12E-06	1.86E-05	0	1.67E-04	-4.06E-05	






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 materials; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Net use of fresh water

"Reading example: 9.0 E-03 = 9.0\*10<sup>-3</sup> = 0.009"

End of life - Waste										
Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D	
 HWD	kg	8.67E-03	3.57E-04	1.15E-03	5.25E-05	1.99E-04	0	1.10E-04	-2.01E-04	
 NHWD	kg	2.29E-01	7.54E-03	4.79E-02	7.15E-04	4.19E-03	0	2.65E-03	-5.14E-03	
 RWD	kg	9.39E-05	7.88E-05	5.10E-06	5.13E-09	4.38E-05	0	0.00E+00	-7.32E-08	

HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed

"Reading example: 9.0 E-03 = 9.0\*10<sup>-3</sup> = 0.009"

End of life - Output flow										
Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D	
 CRU	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	
 MFR	kg	9.03E-05	0.00E+00	1.67E-02	0.00E+00	0.00E+00	0	5.54E-07	0.00E+00	
 MER	kg	5.80E-11	0.00E+00	9.60E-11	0.00E+00	0.00E+00	0	2.18E-09	0.00E+00	
 EEE	MJ	8.72E-07	0.00E+00	6.33E-07	0.00E+00	0.00E+00	0	1.64E-05	0.00E+00	
 EET	MJ	1.62E-06	0.00E+00	7.91E-07	0.00E+00	0.00E+00	0	6.77E-06	0.00E+00	

CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported energy electrical; EET = Exported energy thermal

"Reading example: 9.0 E-03 = 9.0\*10<sup>-3</sup> = 0.009"

Biogenic Carbon Content		
Indicator	Unit	At the factory gate
Biogenic carbon content in product	kg C	4.99E-03
Biogenic carbon content in accompanying packaging	kg C	9.96E-03

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO<sub>2</sub>

## Additional requirements

### Greenhouse gas emissions from the use of electricity in the manufacturing phase

National production mix from import, low voltage (production of transmission lines, in addition to direct emissions and losses in grid) of applied electricity for the manufacturing process (A3).

### Dangerous substances

The product contains no substances given by the REACH Candidate list.

### Indoor environment

The product is certified GEV-Eimicode EC1 Plus

## Additional Environmental Information

### Additional environmental impact indicators required in NPCR Part A for construction products

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
GWPIOBC	kg CO <sub>2</sub> -eq	6.02E-01	1.75E-02	2.27E-02	3.61E-03	9.72E-03	0	5.89E-03	-2.70E-03

GWP-IOBC: Global warming potential calculated according to the principle of instantaneous oxidation. In order to increase the transparency of biogenic carbon contribution to climate impact, the indicator GWP-IOBC is required as it declares climate impacts calculated according to the principle of instantaneous oxidation. GWP-IOBC is also referred to as GWP-GHG in context to Swedish public procurement legislation.

## Bibliography

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ISO 14044:2006 Environmental management - Life cycle assessment - Requirements and guidelines.

EN 15804:2012+A2:2019 Environmental product declaration - Core rules for the product category of construction products.

ISO 21930:2017 Sustainability in buildings and civil engineering works - Core rules for environmental product declarations of construction products.





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NPCR Part A: Construction products and services. Ver. 2.0, 24.03.2021 EPD Norway.

NPCR 009 Part B for Technical - Chemical products for building and construction industry, Ver. 3.0, 06.10.2021, EPD Norway.

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