

**Environmental
Product
Declaration**

ISO14025+EN15804+A2 Bepalingsmethode
'Milieuprestatie Bouwwerken' versie 2.0-februari 2025

This declaration is for:
Fibrofor EcoGreen-AS

Provided by:
Contec Fiber AG



MRPI® registration:

00127.2026.1.0

Program operator:

Stichting MRPI

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MRPI® REGISTRATION

00127.2026.1.0

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15-10-2026

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15-10-2031

SCOPE OF DECLARATION

This MRPI®-EPD certificate is verified by Jeeninga, Anne-Kees, Advieslab V.O.F.. The LCA study has been done by Nauta, Julia, EcoReview NL B.V.. The certificate is based on a LCA-dossier According to ISO14025+EN15804+A2 Bepalingsmethode 'Milieuprestatie Bouwwerken' versie 2.0-februari 2025. It is verified according to the 'Verification protocol for MRPI LCA project report & EPD 16th of April 2026, V. 5.3'. EPDs of construction products may not be comparable if they do not comply with EN15804+A2.

PROGRAM OPERATOR

Stichting MRPI
Kingsfordweg 151
1043 GR
Amsterdam

PRODUCT

Fibrofor EcoGreen-AS

DECLARED AND FUNCTIONAL UNIT

Mass (1 kg)

DESCRIPTION OF PRODUCT

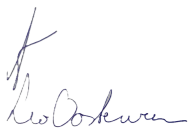
Fibrofor Green is a natural fiber for improving the properties of concrete and mortar components. The fiber ensures uniform and rapid three-dimensional distribution in the matrix. Fibrofor EcoGreen efficiently reduces shrinkage cracks in the early stages of the setting phase.

VISUAL PRODUCT



MORE INFORMATION

<https://contecfiber.com>

Ing. L. L. Oosterveen MSc. MBA Managing Director MRPI	Demonstration of verification
	CEN standard EN15804 serves as the core PCR [1]
	Independent verification of the declaration and data ISO14025+EN15804+A2 Bepalingsmethode 'Milieuprestatie Bouwwerken' versie 2.0-februari 2025 Internal: External: X
	Independent verifier: Jeeninga, Anne-Kees, Advieslab V.O.F..
	
	[1] PCR = Product Category Rules

DETAILED PRODUCT DESCRIPTION

Fibrofor EcoGreen-AS is a 100% natural ecological micro-fiber engineered for 3D matrix reinforcement in concrete, mortar, raw earth, and screed applications. It is sourced from rapidly renewable European plant materials like hemp or kenaf.

When introduced to the mix, the fine filaments rapidly achieve uniform, three-dimensional dispersion to intercept micro-cracking during the early setting stages. Standardized testing demonstrates that the fiber reduces the crack index by up to 87% and specific crack width by 50% without altering the baseline compressive strength or air content of the concrete, significantly lower liquid permeability and extending structural durability.

Fibrofor EcoGreen-AS is tested for fire-resistance according to EN 1364-1.

Component (> 1%)	(kg / %)
Plant Fibers	100%
Packaging	2%

Biogenic carbon content	Unit	Amount of uptake per functional unit
Biogenic carbon content in product	Kg C	1,65
Biogenic carbon content in accompanying packaging	Kg C	0
Note that 1 kg of biogenic carbon is equivalent to 44 / 12 kg of CO ₂ .		

SCOPE AND TYPE

Background database: Ecoinvent 3.9.1

Method: Cut-off, EN 15804+A2

Software: Simapro 10.2

Characterization factor: Environmental Footprint (EF) 3.1

The type of this EPD is Cradle-to-Gate with options. All major steps from the extraction of natural resources to the factory gate are included in the environmental performance of the manufacturing phase, except those that are not relevant to the environmental performance of the product.

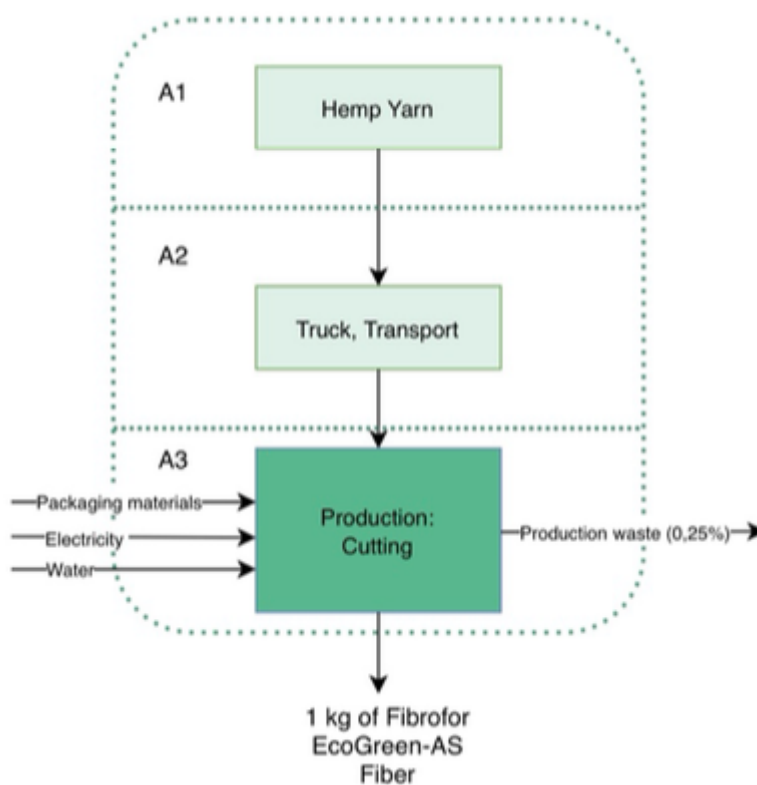
The software SimaPro is used to perform the LCA. The background databases used are:

- Ecoinvent (v3.9.1)

It is not determined as to how the Fibrofor EcoGreen-AS is to be processed at the end of life (after 50 years). Therefore, this module is not considered in this LCA study. As new and improved systems for the recycling of building products are developed over time, these can be determined and then applied to a future LCA study. Concrete produced with Fibrofor EcoGreen-AS can however be broken into aggregates which in turn can be used to produce new concrete. It is economically unfeasible to retrieve the Fibrofor EcoGreen-AS from the cement structure.

PRODUCT STAGE			CONSTRUCTION PROCESS STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARIES
Raw material supply	Transport	Manufacturing	Transport gate to site	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	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	x	ND	ND

X = Modules Assesed
ND = Not Declared



ENVIRONMENTAL IMPACT PER FUNCTIONAL UNIT OR DECLARED UNIT (CORE INDICATORS A2)

Unit		A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-total	kg CO2 eq	-1.02E-01	3.42E-01	2.91E-02	2.69E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.65E+00	ND	ND
GWP-fossil	kg CO2 eq	1.02E+00	3.42E-01	2.62E-02	1.38E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	ND	ND
GWP-biogenic	kg CO2 eq	-1.37E+00	3.09E-04	1.89E-03	-1.37E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.65E+00	ND	ND
GWP-luluc	kg CO2 eq	2.54E-01	1.66E-04	1.07E-03	2.55E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	ND	ND
ODP (A2)	kg CFC11 eq	2.62E-08	7.43E-09	5.55E-10	3.41E-08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	ND	ND
AP mol H+	mol H+ eq	1.24E-02	1.11E-03	2.09E-04	1.38E-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	ND	ND
EP-freshwater	kg P eq	2.89E-03	2.73E-06	1.30E-05	2.91E-03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	ND	ND
EP-marine	kg N eq	1.40E-02	3.79E-04	9.81E-05	1.45E-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	ND	ND
EP-terrestrial	mol N eq	4.45E-02	4.05E-03	7.03E-04	4.93E-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	ND	ND
POCP kg NMVOC	kg NMVOC eq	7.14E-03	1.67E-03	1.52E-04	8.95E-03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	ND	ND
ADP-minerals & metals	kg Sb eq	7.13E-06	1.10E-06	2.51E-07	8.48E-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	ND	ND
ADP-fossil	MJ, net calorific value	1.45E+01	4.85E+00	4.48E-01	1.98E+01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	ND	ND
WDP	m3 world eq. Deprived	1.43E+01	2.25E-02	6.71E-02	1.44E+01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	ND	ND

GWP-total = Global Warming Potential total
 GWP-fossil = Global Warming Potential fossil fuels
 GWP-biogenic = Global Warming Potential biogenic total
 GWP-LULUC = Global Warming Potential land use and land use change
 ODP = Depletion potential of the stratospheric ozone layer
 AP = Acidification Potential, Accumulated Exceedence
 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 Exceedence
 POCP = Formation potential of tropospheric ozone photochemical oxidants
 ADP-minerals & metals = Abiotic Depletion Potential for non-fossil resources [1]
 ADP-fossil = Abiotic Depletion for fossil resources potential [1]
 WDP = Water (user) deprivation potential, deprivation-weighted water consumption [1]

Disclaimer [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 experience with the indicator.

ENVIRONMENTAL IMPACT PER FUNCTIONAL UNIT OR DECLARED UNIT (ADDITIONAL INDICATORS A2)

Unit		A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PM	Disease incidence	1.08E-07	2.71E-08	2.77E-09	1.38E-07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	ND	ND
IRP	kBq U235 eq	3.07E-02	2.43E-03	3.59E-03	3.67E-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	ND	ND
ETP-fw	CTUe	5.82E+02	2.39E00	1.75E+00	5.86E+02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	ND	ND
HTP-c	CTUh	2.32E-09	1.55E-10	2.84E-11	2.50E-09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	ND	ND
HTP-nc	CTUh	-1.49E-07	3.41E-09	1.74E-10	-1.46E-07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	ND	ND
SQP	-	3.13E+02	2.89E00	1.63E+00	3.18E+02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	ND	ND

PM = Potential incidence of disease due to particulate matter emissions
 IRP = Potential Human exposure efficiency relative to U235 [1]
 ETP-fw = Potential Comparative Toxic Unit for ecosystems [2]
 HTP-c = Potential Comparative Toxic Unit for humans, cancer [2]
 HTP-nc = Potential Comparative Toxic Unit for humans, non-cancer [2]
 SQP = Potential soil quality index [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.

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 experience with the indicator.

OUTPUT FLOWS AND WASTE CATEGORIES PER FUNCTIONAL OR DECLARED UNIT (A1 AND A2)

Unit		A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
HWD	kg	5.95E-05	3.09E-05	1.59E-06	9.20E-05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	ND	ND
NHWD	kg	3.58E-01	2.37E-01	8.27E-03	6.03E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	ND	ND
RWD	kg	1.89E-05	1.57E-06	2.03E-06	2.25E-05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	ND	ND
CRU	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	ND	ND
MFR	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	ND	ND
MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	ND	ND
EEE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	ND	ND
ETE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	ND	ND

HWD = Hazardous Waste Disposed
 NHWD = Non Hazardous Waste Disposed
 RWD = Radioactive Waste Disposed
 CRU = Components for reuse
 MFR = Materials for recycling
 MER = Materials for energy recovery
 EEE = Exported Electrical Energy
 ETE = Exported Thermal Energy

RESOURCE USE PER FUNCTIONAL OR DECLARED UNIT (A1 AND A2)

Unit		A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	1.05E+02	7.52E-02	5.51E-01	1.06E+02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	ND	ND
PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	ND	ND
PERT	MJ	1.05E+02	7.52E-02	5.51E-01	1.06E+02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	ND	ND
PENRE	MJ	1.45E+01	4.85E+00	4.48E-01	1.98E+01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	ND	ND
PENRM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	ND	ND
PENRT	MJ	1.45E+01	4.85E+00	4.48E-01	1.98E+01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	ND	ND
SM	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	ND	ND
RSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	ND	ND
NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	ND	ND
FW	m3	3.82E-01	7.53E-04	2.13E-03	3.85E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00E+00	ND	ND

PERE = Use of renewable primary energy excluding renewable primary energy 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 resources excluding non-renewable 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 = Use of net fresh water

CALCULATION RULES

Data collection period

The dataset is representative for the production processes used in 2025. Data covers the entirety of 2025 (12 months).

Methodology and reproducibility

The process descriptions and quantities in this study are reproducible in accordance to the reference standards that have been used. The references of all sources, both primary and public sources and literature, have been documented. In addition, to facilitate the reproducibility of this LCA, a full set of data records has been generated.

Cut off

In this study, all inputs and outputs - such as emissions, energy and material inputs - are included in the calculation according to the Determination Method. The contribution to each impact category by the capital goods is calculated to be no more than 5%.

DATA QUALITY

Data flows have been modeled as realistically as possible. Data quality of the LCA has been assessed based on the EN15804+A2 and is performed in accordance with ISO14040:2006. Quality assessment was based on the system defined in EN15804+A2 - Table E.1.

The overall verdict of the data quality assessment is:

Geographical = Good. In the worst case data was: "Average data from a larger area in which the area under study is included" (Good). In all other cases, data has been classified as very good.

Technological = Good. Datasets selected represent the processes and products under study. However, as it is hard to determine if the technology used was truly identical, the conservative choice has been made to classify no data as "Very good". All datasets however meet the criteria of "Good", being: "Data from processes and products under study with similar technology".

Time = Good. Less than 6 years of difference between the reference year (2025) and the Ecoinvent database (2022).

POWER MIX

For electricity modeling a market-based approach has been used (EcoPlatform - Table 2 - Case - 3A)

For the electricity mix, a low voltage dataset has been selected based on the country of origin (production facility):

Electricity, low voltage [CH] | electricity, low voltage, residual mix | Cut-off, U - 0,0073 kg CO₂-eq./kWh

SCENARIOS AND ADDITIONAL TECHNICAL INFORMATION

A1. Raw materials supply

All materials needed for production as well as packaging is taken into account.

A2. Transport of raw materials to manufacturer

The transportation of the suppliers to Contec Fiber AG is done by truck.

A3. Manufacturing

The production consists of cutting the material into the correct size and bagging in paper packaging. Use of electricity is taken into account (see power mix).

DECLARATION OF SVHC

None of the substances contained in the product are listed in the "Candidate List of Substances of Very High Concern for authorization", or they do not exceed the threshold with the European Chemicals Agency.

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