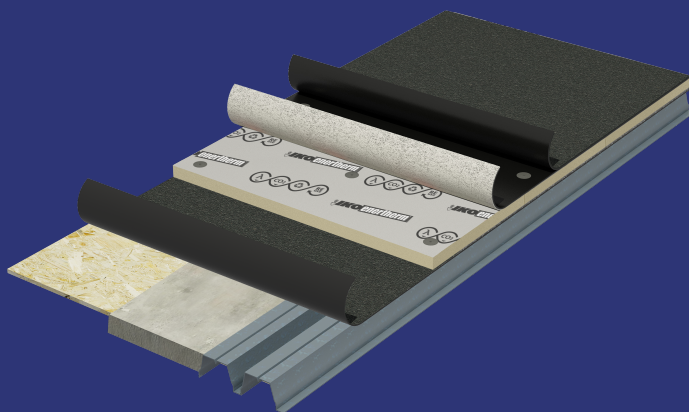


**Environmental
Product
Declaration**

ISO14025+EN15804 A2 (+indicators A1)
Bepalingsmethode 'Milieuprestatie Bouwwerken' versie
1.2-januari 2025

This declaration is for:
IKO powergum 470K14 Atelia

Provided by:
IKO N.V. (ATELIA)



MRPI® registration:

00036.2026.1.0

Program operator:

Stichting MRPI

Publisher:

Stichting MRPI

www.mrpi.nl

Date of first issue:

26-06-2026

Date of this issue:

26-06-2026

Expiry date:

26-06-2031

COMPANY INFORMATION

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MRPI® REGISTRATION

00036.2026.1.0

DATE OF THIS ISSUE

26-06-2026

EXPIRY DATE

26-06-2031

SCOPE OF DECLARATION

This MRPI®-EPD certificate is verified by Gert-Jan Vroege, Eco-Intelligence. The LCA study has been done by Steven Simons, SGS Intron B.V.. The certificate is based on an LCA-dossier According to ISO14025+EN15804 A2 (+indicators A1) Bepalingsmethode 'Milieuprestatie Bouwwerken' versie 1.2-januari 2025. 'It is verified according to the'. Verification protocol for MRPI LCA project report & EPD 21th of May 2025, V. 5.2 EPDs of construction products may not be comparable if they do not comply with EN15804+A2.

PRODUCT

IKO powergum 470K14 Atelia

DECLARED UNIT / FUNCTIONAL UNIT

Area (m2)

DESCRIPTION OF PRODUCT

IKO powergum 470K14 Atelia is part of a roofing membrane system and placed on a roof as a protective layer to make the roof waterproof and protect the roof from various elements.

VISUAL PRODUCT

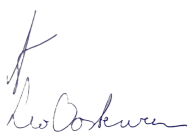


PROGRAM OPERATOR

Stichting MRPI
Kingsfordweg 151
1043 GR
Amsterdam

MORE INFORMATION

<https://eu.iko.com/daksystemen/>

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 (+indicators A1) Bepalingsmethode 'Milieuprestatie Bouwwerken' versie 1.2-januari 2025 Internal: External: X
	Third party verifier: Gert-Jan Vroege, Eco-Intelligence. Certified NMD verifier.
	

DETAILED PRODUCT DESCRIPTION

Product: IKO powergum 470K14 Atelia is a part of a roofing membrane system and placed on a roof as a protective layer to make the roof waterproof and protect the roof from various elements.

Production (A1-A3): Bituminous waterproofing membranes are produced by a continuous process. Raw materials (bitumen and polymers) are mixed separately at a specific range of temperature and successively reinforced with polyester fleece or glass mat (glass mat, glass grid, glass fabric) by impregnation. After calendaring and cooling, the membrane can be finished for practicality and aesthetic reasons by means of different alternative materials, such as polypropylene films, (colored) slates, etc. Membranes are installed on many different type of building roofs as waterproofing, either, as a single or multilayer, depending on the type of selected product.

Reference service life: 50 years

Component (> 1%)	(kg / %)
Coating	Confidential
Bitumen	Confidential
Polyester resin	Confidential
Sand	Confidential

Biogenic carbon content	Unit	Amount of uptake per functional unit
Biogenic carbon content in product	Kg C	0.00E+00
Biogenic carbon content in accompanying packaging	Kg C	0.00E+00
Note that 1 kg of biogenic carbon is equivalent to 44 / 12 kg of CO ₂ .		

SCOPE AND TYPE

The life cycle assessment underlying this EPD was conducted using the background database(s) Ecoinvent 3.9.1

Method: Cut-off, EN 15804+A2

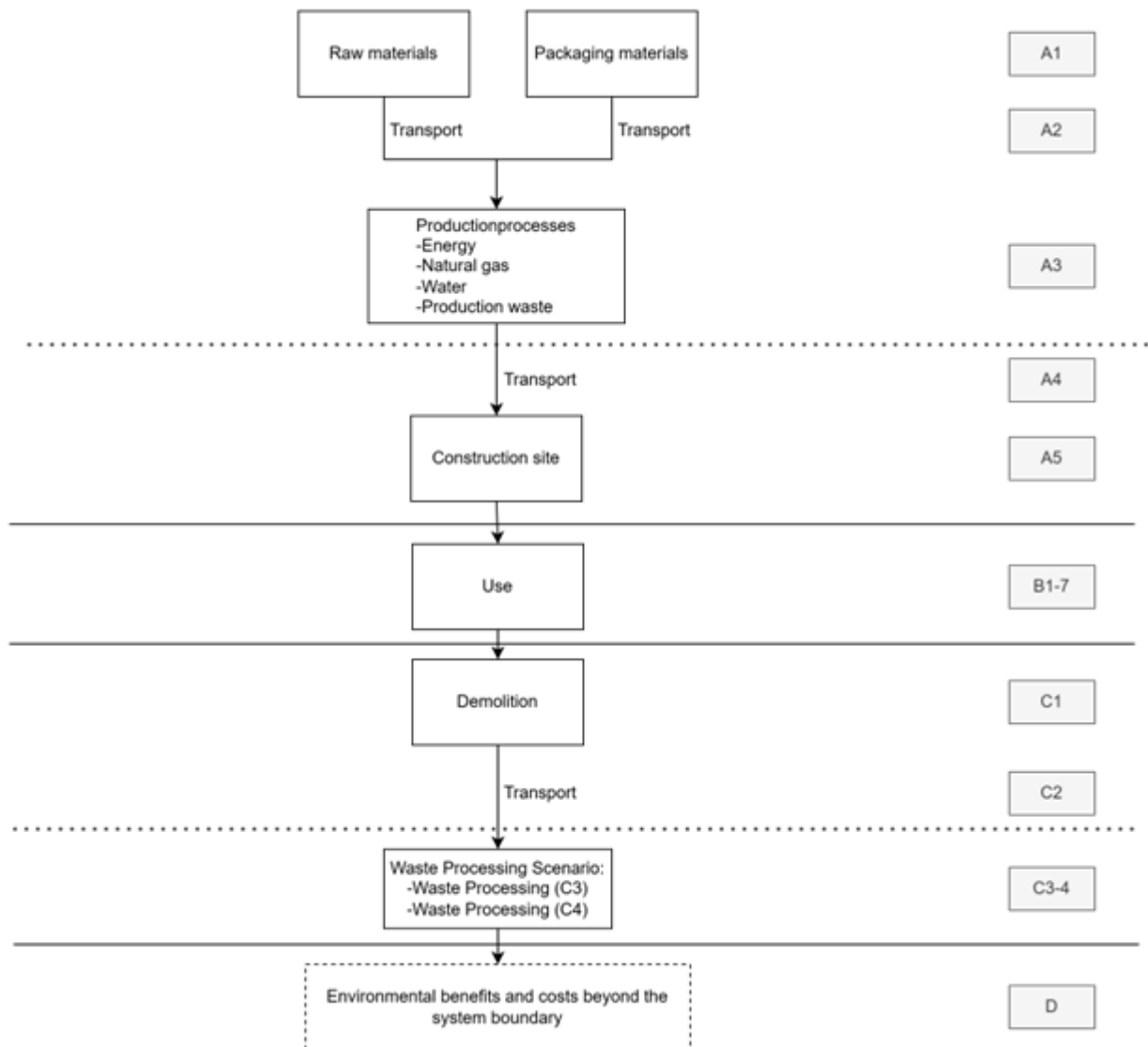
and LCA software Simapro 10.2.

Version characterization factors: Environmental Footprint (EF) 3.1

The LCA for the IKO powergum 470K14 Atelia includes the entire life cycle. All major steps from the extraction of raw materials to the end-of-life of the product are included in the scope of the study. This EPD is for IKO powergum 470K14 Atelia, part of a roofing membrane. The roofing membrane is produced by IKO n.v.. The main production location is Antwerpen Belgium. The end-of-life scenario for the roofing membrane based on IKO's take-back guarantee (5% landfill, 5% incineration and 90% recycling). The LCA is produced with Simapro v10.2 software and background database is Ecoinvent 3.6. and Ecoinvent 3.9.1

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	x	x	x	x	x	x	ND	ND	x	x	x	x	x	x

X = Modules Assesed
 ND = Not Declared



ENVIRONMENTAL IMPACT PER FUNCTIONAL UNIT OR DECLARED UNIT INDICATORS (A1)

Unit		A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
ADPE	kg Sb eq	1.71E-04	2.49E-06	1.55E-06	1.75E-04	2.34E-06	6.14E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	9.62E-07	2.38E-05	1.18E-07	-4.96E-06
ADPF	MJ	1.64E+02	1.51E+00	8.01E+00	1.74E+02	1.39E+00	6.98E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	5.73E-01	2.89E+01	1.44E-01	-7.75E+01
GWP	kg CO2 eq	3.10E+00	9.94E-02	3.80E-01	3.58E+00	9.17E-02	2.82E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	3.76E-02	1.93E+00	6.02E-01	-1.07E+00
ODP (A1)	kg CFC11 eq	1.55E-06	1.76E-08	6.11E-08	1.63E-06	1.63E-08	6.66E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	6.68E-09	1.98E-07	2.89E-09	-9.56E-07
POCP	kg ethene eq	5.42E-03	6.19E-05	7.29E-05	5.55E-03	5.53E-05	2.25E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	2.27E-05	7.88E-04	2.05E-05	-2.16E-03
AP kg SO2	kg SO2 eq	1.79E-02	4.94E-04	4.27E-04	1.88E-02	4.03E-04	8.71E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	1.66E-04	4.30E-03	1.46E-04	-7.33E-03
EP	kg (PO4) 3-eq	2.60E-03	9.11E-05	6.43E-05	2.75E-03	7.92E-05	1.34E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	3.25E-05	7.21E-04	3.49E-05	-1.09E-03

Toxicity indicators and ECI (Dutch market)

Unit		A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
HTP	kg DCB eq	1.67E+00	4.22E-02	6.69E-02	1.78E+00	3.86E-02	1.20E-01	6.15E-02	0.00E+00	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	1.59E-02	1.56E+00	1.27E-02	-6.47E-01
FAETP	kg DCB eq	5.63E-02	1.21E-03	1.13E-03	5.86E-02	1.13E-03	2.95E-03	3.07E-03	0.00E+00	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	4.63E-04	1.99E-02	1.02E-03	-2.52E-02
MAETP	kg DCB eq	1.80E+02	4.39E+00	3.47E+00	1.87E+02	4.05E+00	9.24E+00	1.32E+01	0.00E+00	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	1.66E+00	5.12E+01	1.89E+00	-8.77E+01
TETP	kg DCB eq	5.44E-03	1.48E-04	1.23E-03	6.82E-03	1.36E-04	5.36E-04	4.22E-04	0.00E+00	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	5.60E-05	8.89E-03	2.11E-05	-1.39E-03
ECI	euro	4.43E-01	1.23E-02	2.84E-02	4.84E-01	1.11E-02	3.16E-02	6.97E-03	0.00E+00	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	4.54E-03	2.70E-01	3.24E-02	-1.71E-01
ADPFk gSb	kg Sb eq	7.67E-02	7.28E-04	2.99E-03	8.04E-02	6.74E-04	3.14E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	2.77E-04	9.82E-03	7.31E-05	-3.68E-02

ADPE = Abiotic Depletion Potential for non-fossil resources
ADPF = Abiotic Depletion Potential for fossil resources
GWP = Global Warming Potential
ODP = Depletion potential of the stratospheric ozone layer
POCP = Formation potential of tropospheric ozone photochemical oxidants
AP = Acidification Potential of land and water
EP = Eutrophication Potential
HTP = Human Toxicity Potential
FAETP = Fresh water aquatic ecotoxicity potential
MAETP = Marine aquatic ecotoxicity potential
TETP = Terrestrial ecotoxicity potential
ECI = Environmental Cost Indicator
ADPF = Abiotic Depletion Potential for fossil resources

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 CO ₂ eq	3.88E+00	1.11E-01	3.90E-01	4.38E+00	1.02E-01	3.13E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	4.20E-02	1.94E+00	6.02E-01	-1.58E+00
GWP-fossil	kg CO ₂ eq	3.83E+00	1.10E-01	3.89E-01	4.33E+00	1.02E-01	3.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	4.18E-02	1.94E+00	6.02E-01	-1.58E+00
GWP-biogenic	kg CO ₂ eq	5.11E-02	1.67E-04	1.34E-03	5.26E-02	1.59E-04	1.71E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	6.51E-05	1.05E-03	1.37E-04	-8.53E-04
GWP-luluc	kg CO ₂ eq	1.84E-03	3.85E-04	7.85E-05	2.31E-03	3.63E-04	1.30E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	1.49E-04	1.19E-03	8.78E-06	-4.09E-04
ODP (A2)	kg CFC11 eq	8.71E-07	1.95E-09	1.67E-08	8.89E-07	1.81E-09	3.00E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	7.43E-10	2.96E-08	1.85E-09	-1.16E-07
AP mol H+	mol H+ eq	1.72E-02	5.98E-04	6.36E-04	1.84E-02	4.87E-04	8.97E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	2.00E-04	5.64E-03	1.86E-04	-6.13E-03
EP-freshwater	kg P eq	8.46E-05	1.08E-06	2.84E-06	8.86E-05	1.01E-06	4.37E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	4.15E-07	3.42E-05	2.78E-07	-1.04E-05
EP-marine	kg N eq	3.31E-03	2.16E-04	1.55E-04	3.68E-03	1.85E-04	2.12E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	7.60E-05	1.51E-03	8.14E-05	-1.25E-03
EP-terrestrial	mol N eq	3.54E-02	2.32E-03	1.74E-03	3.94E-02	1.97E-03	2.29E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	8.10E-04	1.64E-02	6.36E-04	-1.15E-02
POCP kg NMVOC	kg NMVOC eq	2.81E-02	7.74E-04	8.11E-04	2.97E-02	6.74E-04	1.33E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	2.77E-04	6.03E-03	1.87E-04	-1.33E-02
ADP-minerals & metals	kg Sb eq	1.55E-05	3.39E-07	1.84E-06	1.76E-05	3.19E-07	1.06E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	1.31E-07	1.20E-05	4.04E-08	-1.97E-06
ADP-fossil	MJ, net calorific value	1.67E+02	1.57E+00	8.15E+00	1.77E+02	1.46E+00	7.23E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	5.98E-01	3.04E+01	1.46E-01	-7.96E+01
WDP	m3 world eq. Deprived	1.09E+00	8.48E-03	7.46E-02	1.17E+00	7.96E-03	4.99E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	3.27E-03	3.51E-01	6.11E-03	-1.45E-01

GWP-total = Global Warming Potential total
 GWP-fossil = Global Warming Potential fossil fuels
 GWP-biogenic = Global Warming Potential biogenictotal
 GWP-LULUC = Global Warming Potential land use and land use change
 ODP = Depletion potential of the stratospheric ozone layer
 AP = Acidification Potential, Accumulated Exceedence
 AP-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	1.62E-07	1.07E-08	4.86E-09	1.78E-07	1.00E-08	1.08E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	4.12E-09	9.92E-08	1.56E-09	-4.45E-08
IRP	kBq U235 eq	9.68E-02	6.07E-04	4.48E-02	1.42E-01	5.68E-04	1.02E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	2.33E-04	1.84E-01	2.42E-04	-9.91E-03
ETP-fw	CTUe	6.14E+01	1.15E+00	6.44E-01	6.32E+01	1.08E+00	2.62E+00	5.78E-02	0.00E+00	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	4.41E-01	7.82E+00	1.48E-01	-3.49E+01
HTP-c	CTUh	1.64E-09	5.81E-11	1.22E-10	1.82E-09	5.39E-11	1.47E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	2.21E-11	1.82E-09	8.07E-11	-5.18E-10
HTP-nc	CTUh	2.95E-08	1.25E-09	2.52E-09	3.32E-08	1.17E-09	2.00E-09	7.33E-10	0.00E+00	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	4.80E-10	2.15E-08	3.95E-10	-9.74E-09
SQP	-	1.39E+01	1.22E+00	1.03E+00	1.61E+01	1.15E+00	1.02E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	4.72E-01	1.47E+01	1.94E-01	-4.21E+00

PM = Potential Comparative Toxic Unit for humans, non-cancer [2]
 IRP = Potential incidence of disease due to PM emissions
 ETP-fw = Potential Human exposure efficiency relative to U235 [1]
 HTP-c = Potential Comparative Toxic Unit for ecosystems [2]
 HTP-nc = Potential Comparative Toxic Unit for humans, 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	1.72E-03	9.98E-06	2.60E-05	1.75E-03	9.29E-06	5.98E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	3.81E-06	8.39E-05	6.50E-07	-3.57E-04
NHWD	kg	4.61E-01	1.02E-01	6.45E-02	6.27E-01	9.63E-02	5.71E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	3.95E-02	8.54E-01	2.59E-01	-5.98E-02
RWD	kg	7.28E-05	3.56E-07	3.64E-05	1.10E-04	3.33E-07	8.02E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	1.37E-07	1.48E-04	1.63E-07	-4.49E-06
CRU	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	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	0.00E+00	4.40E+00	0.00E+00	0.00E+00
MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.34E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.45E-01	0.00E+00
EEE	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	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E+00
ETE	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	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.07E+00

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	2.42E+00	2.20E-02	3.28E-01	2.77E+00	2.06E-02	1.58E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	8.45E-03	1.91E+00	8.20E-03	-2.12E-01
PERM	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	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	2.42E+00	2.20E-02	3.28E-01	2.77E+00	2.06E-02	1.58E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	8.45E-03	1.91E+00	8.20E-03	-2.12E-01
PENRE	MJ	1.67E+02	1.57E+00	8.15E+00	1.77E+02	1.46E+00	7.23E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	5.99E-01	3.04E+01	1.46E-01	-7.96E+01
PENRM	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	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	MJ	1.67E+02	1.57E+00	8.15E+00	1.77E+02	1.46E+00	7.23E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	5.99E-01	3.04E+01	1.46E-01	-7.96E+01
SM	kg	3.83E-01	0.00E+00	0.00E+00	3.83E-01	0.00E+00	1.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	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	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NSRF	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	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m3	2.42E-02	3.74E-04	1.86E-03	2.64E-02	3.52E-04	1.22E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	0.00E+00	0.00E+00	1.45E-04	9.62E-03	2.77E-04	-4.95E-03

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
 NSRF = Use of non-renewable secondary fuels
 FW = Use of net fresh water

CALCULATION RULES

Data quality requirements follow EN15804+A2:2019. Data is of reference period 2023, representing data for the production of one m2 IKO powergum 470K14 Atelia. Processes used in the background modelling are referring to Ecoinvent 3.6 (September 12, 2019) and 3.9.1 (December 15, 2022). Characterization factor: Environmental Footprint 3.1. The technological and geographical coverage reflects the physical reality as far as possible. Data quality is assessed as good on average and adequate to the goal and scope of the study. Cut-off criteria and allocation procedures: The only materials excluded from the calculation were wood packaging that is reused several times. No other cut-offs or allocation procedures were intentionally applied to inputs and outputs within the system boundaries in the models.

DATA QUALITY REPRESENTATIVENESS

Representativeness	Quality level	Remarks
Geographical Representativeness	Very good	The location of the process has a direct relation to the desired area.
Technical Representativeness	Very good	Data from a specific company, process and product of study.
Time Representativeness	Good	2-5 year difference between the year of data collection and the current year.

POWER MIX

The energy processes used in the calculation are listed in the table below. The process used for the energy in Belgium was: Electricity, low voltage {BE}| electricity, low voltage, residual mix | Cut-off, U. This is a market based approach.

Global warming potential of 1 kWh energy	Process	kg CO2eq
Production energy: Belgium	Electricity, low voltage {BE} electricity, low voltage, residual mix Cut-off, U	0.203

SCENARIOS AND ADDITIONAL TECHNICAL INFORMATION

The product stage, A1-A3, includes the extraction and processing of raw materials for the product and the packaging, their transportation to the production site by truck and ship. Electricity consumption is modelled using primary data on the amount and a dataset for normal belgium grid mix.

The installation stage (A4-A5) includes transport of the roofing membrane to the installation site, and the materials and energy required to install the roofing membrane, also including treatment of waste from installation materials and packaging excluding wood that was reused several times.

The use phase (B) includes the leaching.

For the end-of-life stage (C), a scenario is used which is based on IKO's take-back guarantee (5% landfill, 5% incineration and 90% recycling). Default waste transport distance is 50 km for waste processing, an additional 50 km for landfill waste and 100 km for incineration.

DECLARATION OF SVHC

No substances that are listed in the latest "Candidate List of Substances of Very High Concern for authorisation" are included in the product that exceed the limit for registration.

REFERENCES

Stichting nationale Milieudatabase, Bepalingsmethode Milieuprestatie Bouwwerken versie 1.2.

EN 15804:2012+A2:2019, Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products, 2019.

ISO, ISO 14025:2006 Environmental labels and declarations — Type III environmental declarations — Principles and procedures, 2006.

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