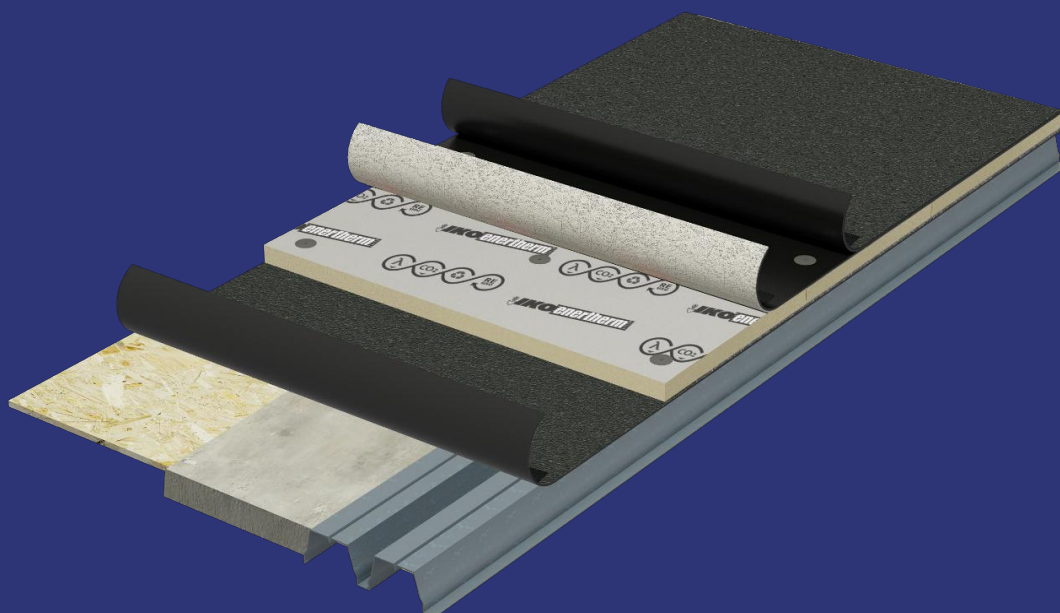


**Environmental
Product
Declaration**

According to EN15804+A2 (+indicators A1)

This declaration is for:
IKO powerflex PF 5000 Atelia

Provided by:
IKO n.v.



MRPI® registration:
1.1.00803.2025

Program operator:
Stichting MRPI®
Publisher:
Stichting MRPI®
www.mrpi.nl

Date of first issue:
15-4-2025
Date of this issue:
15-4-2025
Expiry date:
15-4-2030

COMPANY INFORMATION

IKO n.v.
D'Herbouvillekaai 80
B-2020
Antwerpen
Belgium
0032 3 248 3000

be.iko.com

MRPI® REGISTRATION

1.1.00803.2025

DATE OF THIS ISSUE

15-4-2025

EXPIRY DATE

15-4-2030

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 EN15804+A2 (+indicators A1). It is verified according to the 'MRPI®-EPD verification protocol November 2020.v4.0'. EPDs of construction products may not be comparable if they do not comply with EN15804+A2. Declaration of SVHC that are listed on the 'Candidate list of Substances of Very High Concern for authorisation' when content exceeds the limits for registration with ECHA.

PROGRAM OPERATOR

Stichting MRPI®
Kingsfordweg 151
1043 GR
Amsterdam

PRODUCT

IKO powerflex PF 5000 Atelia

DECLARED UNIT / FUNCTIONAL UNIT

1 Productiveness (m2)

DESCRIPTION OF PRODUCT

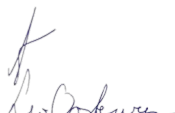
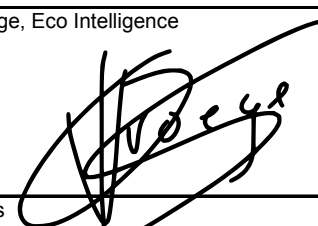
IKO powerflex PF 5000 Atelia is a part of a roofing membrane system and placed on a roof as a protective layer to make the roof waterproof and protect the roof from various elements.

VISUAL PRODUCT



MORE INFORMATION

<https://eu.iko.com/nl-nl/productbladen/>

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 an data according to EN15804+A2 (+indicators A1) Internal: External: X
	Third party verifier: Gert-Jan Vroege, Eco Intelligence  [1] PCR = Product Category Rules

DETAILED PRODUCT DESCRIPTION (PART 1)

Product: IKO powerflex PF 5000 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

DETAILED PRODUCT DESCRIPTION (PART 2)

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}| market for | Cut-off, U.

Global warming potential of 1 kWh energy	Process	kg CO ₂ eq
Production energy: Belgium	Electricity, low voltage {BE} market for Cut-off, U	0,244

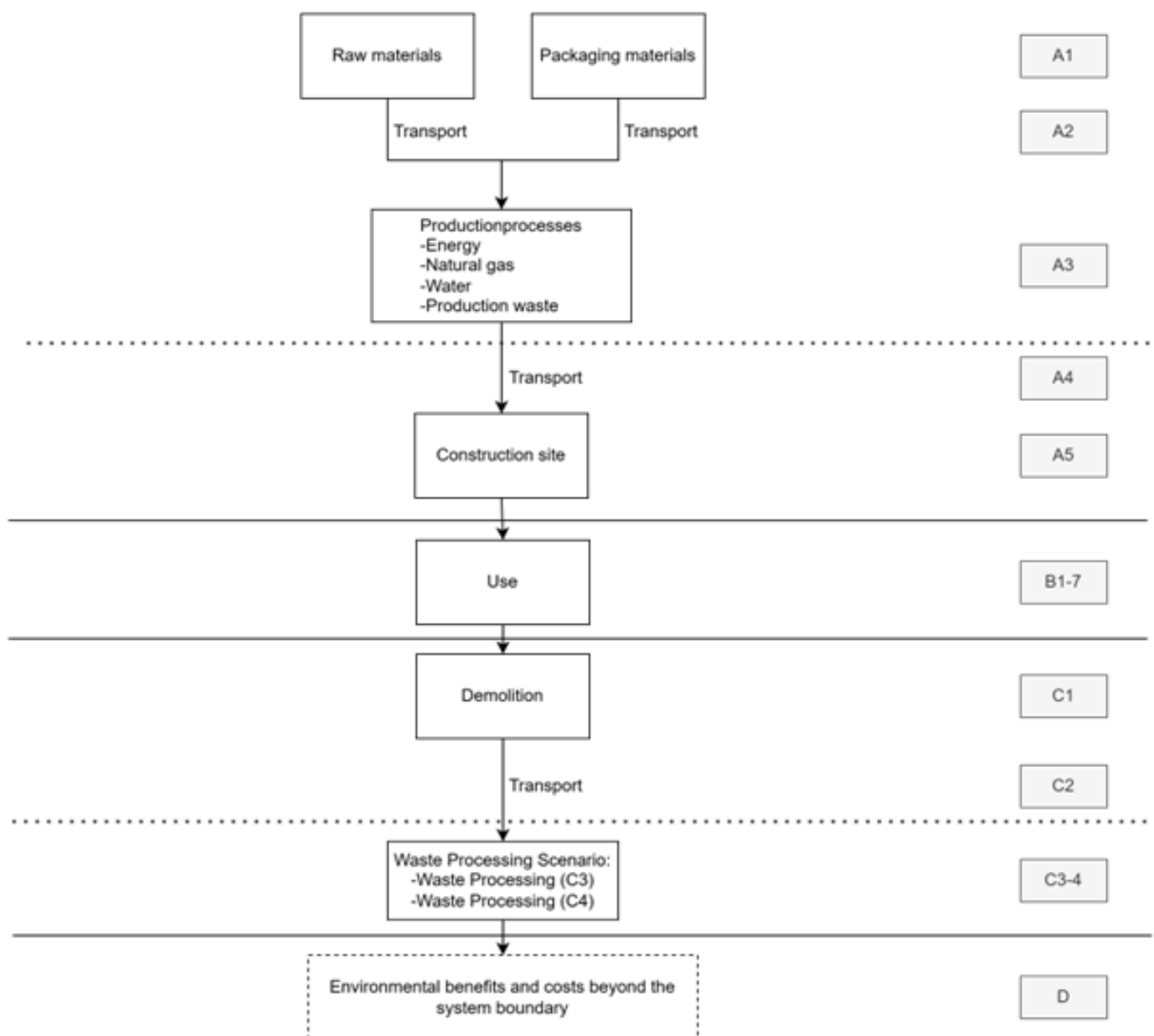
SCOPE AND TYPE

The LCA for the IKO powerflex PF 5000 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 powerflex PF 5000 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 software and background database is Ecoinvent 3.6.

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	X	ND	ND	X	X	X	X	X

X = Modules Assessed

ND = Not Declared



REPRESENTATIVENESS

The EPD is representative for IKO powerflex PF 5000 Atelia a part of a roofing membrane which is manufactured in Antwerp, Belgium.

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.	1,29E-04	6,14E-06	1,21E-06	1,36E-04	2,59E-06	5,10E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	0,00E+00	2,49E-06	2,62E-05	1,30E-07	-5,48E-06
ADPF	MJ	1,20E+02	3,70E+00	7,60E+00	1,31E+02	1,54E+00	5,82E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	0,00E+00	1,48E+00	3,19E+01	1,59E-01	-8,58E+01
GWP	kg CO2 eq.	2,00E+00	2,44E-01	3,52E-01	2,60E+00	1,01E-01	2,36E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	0,00E+00	9,75E-02	2,13E+00	6,64E-01	-1,20E+00
ODP	kg CFC11 eq.	1,43E-06	4,32E-08	5,84E-08	1,53E-06	1,80E-08	6,40E-08	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	0,00E+00	1,73E-08	2,19E-07	3,19E-09	-1,06E-06
POCP	kg ethene eq.	3,56E-03	1,51E-04	6,19E-05	3,77E-03	6,11E-05	1,75E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	0,00E+00	5,88E-05	8,70E-04	2,27E-05	-2,38E-03
AP	kg SO2 eq.	1,44E-02	1,19E-03	3,68E-04	1,60E-02	4,45E-04	8,09E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	0,00E+00	4,29E-04	4,74E-03	1,61E-04	-8,11E-03
EP	kg (PO4) ³ eq.	2,31E-03	2,22E-04	5,46E-05	2,59E-03	8,74E-05	1,35E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	0,00E+00	8,42E-05	7,96E-04	3,85E-05	-1,21E-03

Toxicity indicators and ECI (Dutch market)

HTP	kg DCB eq.	1,56E+00	1,04E-01	4,43E-02	1,70E+00	4,26E-02	1,24E-01	2,43E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	0,00E+00	4,10E-02	1,73E+00	1,40E-02	-7,15E-01
FAETP	kg DCB eq.	5,25E-02	2,98E-03	8,38E-04	5,63E-02	1,24E-03	3,02E-03	2,08E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	0,00E+00	1,20E-03	2,19E-02	1,13E-03	-2,78E-02
MAETP	kg DCB eq.	1,55E+02	1,08E+01	2,74E+00	1,68E+02	4,48E+00	9,93E+00	9,13E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	0,00E+00	4,31E+00	5,65E+01	2,09E+00	-9,68E+01
TETP	kg DCB eq.	5,90E-03	3,64E-04	1,10E-03	7,37E-03	1,51E-04	5,88E-04	2,87E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	0,00E+00	1,45E-04	9,81E-03	2,33E-05	-1,54E-03
ECI	euro	3,52E-01	3,01E-02	2,45E-02	4,07E-01	1,22E-02	2,93E-02	3,18E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	0,00E+00	1,17E-02	2,98E-01	3,58E-02	-1,89E-01
ADPF	kg Sb eq.	5,68E-02	1,79E-03	2,85E-03	6,14E-02	7,44E-04	2,61E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	0,00E+00	7,17E-04	1,08E-02	8,07E-05	-4,08E-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 CO2 eq.	1,99E+00	2,46E-01	3,58E-01	2,60E+00	1,02E-01	3,17E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	0,00E+00	9,84E-02	2,15E+00	6,71E-01	-1,22E+00
GWP-fossil kg CO2 eq.	2,02E+00	2,46E-01	3,57E-01	2,63E+00	1,02E-01	2,39E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	0,00E+00	9,83E-02	2,15E+00	6,71E-01	-1,22E+00
GWP-biogenic kg CO2 eq.	-3,39E-02	1,09E-04	1,26E-03	-3,26E-02	4,71E-05	7,79E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	0,00E+00	4,54E-05	-2,20E-03	1,46E-04	-1,35E-03
GWP-luluc kg CO2 eq.	1,93E-03	9,19E-05	2,14E-04	2,24E-03	3,74E-05	1,31E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	0,00E+00	3,60E-05	1,87E-03	7,45E-06	-2,17E-04
ODP kg CFC11 eq.	1,79E-06	5,42E-08	5,53E-08	1,90E-06	2,25E-08	7,75E-08	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	0,00E+00	2,17E-08	2,05E-07	3,42E-09	-1,33E-06
AP mol H+ eq.	1,73E-02	1,57E-03	4,67E-04	1,93E-02	5,92E-04	9,97E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	0,00E+00	5,70E-04	6,04E-03	2,10E-04	-9,48E-03
EP-fresh water kg P eq.	6,05E-05	2,45E-06	2,79E-06	6,57E-05	1,03E-06	3,50E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	0,00E+00	9,92E-07	3,88E-05	3,24E-07	-9,77E-06
EP-marine kg N eq.	2,51E-03	5,35E-04	1,15E-04	3,16E-03	2,09E-04	2,07E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	0,00E+00	2,01E-04	1,60E-03	8,99E-05	-1,23E-03
EP-terrestrial mol N eq.	2,93E-02	5,91E-03	1,32E-03	3,65E-02	2,30E-03	2,33E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	0,00E+00	2,22E-03	1,78E-02	7,06E-04	-1,36E-02
POCP kg NMVOC eq.	1,32E-02	1,67E-03	4,05E-04	1,53E-02	6,57E-04	8,56E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	0,00E+00	6,32E-04	5,61E-03	1,98E-04	-8,06E-03
ADP-minerals & metals kg Sb eq.	1,29E-04	6,14E-06	1,21E-06	1,36E-04	2,59E-06	5,10E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	0,00E+00	2,49E-06	2,62E-05	1,30E-07	-5,48E-06
ADP-fossil MJ, net calorific value	1,20E+02	3,70E+00	7,60E+00	1,31E+02	1,54E+00	5,82E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	0,00E+00	1,48E+00	3,19E+01	1,59E-01	-8,58E+01
WDP m3 world eq. Deprived	4,93E-01	1,31E-02	6,37E-02	5,69E-01	5,51E-03	3,55E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	0,00E+00	5,30E-03	4,79E-01	7,22E-03	-6,00E-02

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
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 inci-dence	1,08E-07	2,18E-08	2,58E-09	1,32E-07	9,17E-09	9,41E-09	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	0,00E+00	8,83E-09	9,31E-08	1,69E-09	-4,54E-08
IRP kBq U235 eq.	4,96E-01	1,55E-02	3,94E-02	5,51E-01	6,45E-03	2,68E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	0,00E+00	6,21E-03	2,15E-01	6,23E-04	-3,46E-01
ETP-fw CTUe	8,08E+01	3,28E+00	1,85E+00	8,59E+01	1,37E+00	4,11E+00	2,61E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	0,00E+00	1,32E+00	2,55E+01	3,06E-01	-4,14E+01
HTP-c CTUh	1,20E-09	1,08E-10	6,94E-11	1,38E-09	4,45E-11	1,33E-10	1,00E-13	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	0,00E+00	4,29E-11	2,04E-09	8,95E-11	-3,99E-10
HTP-nc CTUh	3,14E-08	3,58E-09	1,37E-09	3,63E-08	1,50E-09	2,94E-09	3,46E-10	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	0,00E+00	1,45E-09	3,05E-08	5,21E-10	-1,14E-08
SQP -	2,22E+01	3,16E+00	1,07E+00	2,64E+01	1,34E+00	1,50E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	0,00E+00	1,29E+00	1,79E+01	2,21E-01	-9,58E+00

- PM = Potential incidence of disease due to PM 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 [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 unit or declared unit (A1 en A2)

	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
HWD	kg	8,05E-04	9,26E-06	8,08E-06	8,22E-04	3,90E-06	2,77E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	0,00E+00	3,76E-06	3,89E-05	2,85E-07	-3,67E-05
NHWD	kg	3,16E-01	2,30E-01	1,02E-01	6,48E-01	9,77E-02	6,01E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	0,00E+00	9,41E-02	8,79E-01	2,86E-01	-4,91E-02
RWD	kg	7,89E-04	2,43E-05	3,49E-05	8,48E-04	1,01E-05	3,77E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	0,00E+00	9,74E-06	2,05E-04	7,62E-07	-5,68E-04
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	0,00E+00	ND	ND	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	1,46E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	0,00E+00	0,00E+00	4,86E+00	0,00E+00	0,00E+00
MER	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	0,00E+00	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,39E-02	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	1,46E+00	0,00E+00
ETE	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,56E-02	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	2,52E+00	0,00E+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 unit 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	2,36E+00	4,59E-02	3,84E-01	2,79E+00	1,93E-02	1,64E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	INA	INA	0,00E+00	1,86E-02	2,46E+00	8,45E-03	-2,01E-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	0,00E+00	INA	INA	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT MJ	2,36E+00	4,59E-02	3,84E-01	2,79E+00	1,93E-02	1,64E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	INA	INA	0,00E+00	1,86E-02	2,46E+00	8,45E-03	-2,01E-01
PENRE MJ	1,27E+02	3,93E+00	8,16E+00	1,39E+02	1,63E+00	6,17E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	INA	INA	0,00E+00	1,57E+00	3,34E+01	1,70E-01	-9,14E+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	0,00E+00	INA	INA	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT MJ	1,27E+02	3,93E+00	8,16E+00	1,39E+02	1,63E+00	6,17E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	INA	INA	0,00E+00	1,57E+00	3,34E+01	1,70E-01	-9,14E+01
SM kg	1,70E+00	0,00E+00	0,00E+00	1,70E+00	0,00E+00	5,10E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	INA	INA	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-1,68E+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	0,00E+00	INA	INA	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	0,00E+00	INA	INA	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW m3	1,56E-02	4,46E-04	1,79E-03	1,78E-02	1,88E-04	1,09E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	INA	INA	0,00E+00	1,81E-04	1,38E-02	3,15E-04	-2,28E-03

PERE	=	Use of renewable energy excluding renewable primary energy resources
PERM	=	Use of renewable 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

BIOGENIC CARBON CONTENT per functional unit 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
BBCpr kg C	ND	ND	ND	0,00E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BCCpa kg C	1,93E-02	ND	ND	1,93E-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

BBCpr	=	Biogenic carbon content in product
BCCpa	=	Biogenic carbon content in packaging

CALCULATION RULES (PART 1)

Data quality requirements follow EN15804+A2:2019. Data is of reference period 2023, representing data for the production of one m2 IKO powerflex PF 5000 Atelia. Processes used in the background modelling are referring to Ecoinvent 3.6. 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.

SCENARIOS AND ADDITIONAL TECHNICAL INFORMATION (PART 1)

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.

SCENARIOS AND ADDITIONAL TECHNICAL INFORMATION (PART 2)

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.

SCENARIOS AND ADDITIONAL TECHNICAL INFORMATION (PART 3)

The use phase (B) includes the leaching.

SCENARIOS AND ADDITIONAL TECHNICAL INFORMATION (PART 4)

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 100 km for landfill waste and 150 km for incineration. The materials that are recycled have the same distance as in A4: 136 km.

SCENARIOS AND ADDITIONAL TECHNICAL INFORMATION (PART 5)

IKO's two-layer waterproofing system has a technical service life of 50 years, based on studies and lifetime evaluations for IKO SBS-modified bitumen membranes with similar technical properties and from similar raw materials, conducted by Bunch Byggningsfysik.

The evaluations are based on visual inspection of roofs made with IKO roofing membranes from 1995-2000, discussions with owners of the buildings and laboratory tests made for specimens taken from the roofs.

The technical service life is applicable in Northern Europe including Finland, Norway, Sweden, Denmark, and the Baltic countries, which are located in the Northern temperate belt where studies and evaluations have been conducted. The Northern temperate belt includes temperate coastal climate and temperate continental climate.

The technical service life of 50 years applies for following IKO two-layer systems with PF 5000 Atelia as a top layer:

- IKO base PF 3500 SBS + IKO powerflex PF 5000 Atelia
- IKO base PF 3500 SBS Atelia + IKO powerflex PF 5000 Atelia
- IKO base PF 3500 Quadra GRIP + IKO powerflex PF 5000 Atelia
- IKO base PF 3500 SBS Grip + IKO powerflex PF 5000 Atelia

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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