Environmental Product Declaration according to ISO 14025 and EN 15804



This declaration is for: **Icopal Universal SA**

Provided by: **BMI Icopal**





program operator
Stichting MRPI®
publisher
Stichting MRPI®
www.mrpi.nl

MRPI® registration
1.1.00299.2022
date of first issue
21-12-2022
date of this issue
21-12-2022
expiry date
21-12-2027









COMPANY INFORMATION



BMI Icopal Hoendiep 316 9744 TC Groningen

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PRODUCT

Icopal Universal SA



DECLARED UNIT/FUNCTIONAL UNIT

One m2 waterproof roofing incl. fastening materials for a flat roof with a maximum slope of $20 {\rm \AA}^{\circ}$. Representative for roof areas > 50 m2. Excl. insulation material and the roof construction.



DESCRIPTION OF PRODUCT

Self adhesive single ply waterproofing membrane



VISUAL PRODUCT





MRPI® REGISTRATION

1.1.00299.2022

DATE OF ISSUE

21-12-2022

EXPIRY DATE

21-12-2027



MORE INFORMATION

https://www.bmigroup.com/nl/p/icopal-universal-sa-zwart-2924688656/

This MRPI®-EPD certificate is verified by Kamiel Jansen, Aveco de Bondt.

The LCA study has been done by Wouter Jan van den Berg, BMI Group.

The certificate is based on an LCA-dossier according to ISO14025 and EN15804+A2/Bepalingsmethode. 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/Bepalingsmethode. 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

SCOPE OF DECLARATION

Stichting MRPI® Kingsfordweg 151 1043GR Amsterdam



ir. J-P den Hollander, Managing director MRPI®

DEMONSTRATION OF VERIFICATION

CEN standard EN15804 serves as the core PCR[a]

Independent verification of the declaration and data,

according to EN ISO 14025:2010:

internal:

external: X

Third party verifier:

Jansen

Kamiel Jansen, Aveco de Bondt

[a] PCR = Product Category Rules





DETAILED PRODUCT DESCRIPTION

Icopal Universal SA (Self Adhesive) is applied in one layer as an edge strip for fire-safe detailing (eaves and gutters). Thanks to the self-adhesive coating on the underside, the roof roll can easily be applied to a substrate that has been treated with Icopal SA Primer. Overlaps are welded with hot air. Icopal Universal SA can connect both Icopal Universal roofing rolls and other bituminous roofing membranes. Icopal Universal SA roofing consists of a polyolefin copolymer bitumen (POCB) reinforced with fiberglass and polyester. Icopal Universal SA has a SA (Self Adhesive) coating with a very high adhesive strength. Both sides of the roof roll are provided with an overlap without a self-adhesive coating. This means that when processing the roll in strips (cut from the length of the roll), both strips have an overlap of POCB coating. This results in an optimal, watertight weld connection.

The reference service life (RSL) is 35 years.

COMPONENT > 1% of total mass	[%]
polypropylene	confidential
bitumen	confidential
reinforcement (consisting of polyester and glass fiber)	confidential
ancillary materials (like Icopal SA Primer)	confidential

SCOPE AND TYPE

Icopal Universal SA is produced in Groningen (Netherlands) and sold in the UK. The background database is Ecoinvent 3.6. This MRPI EPD is specific to Icopal Universal SA.

PROD	UCT ST	AGE	CONST	RUCTION			US	SE ST	AGE			E	ND O	F LIFE		BENEFITS AND
			PRO	CESS									STA	GE		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	A1 A2 A3 A4 A5 B1 I					B2	В3	B4	B5	B6	B7	C1	C2	C3	C4	D
х						х	х	ND	ND	ND	ND	х	х	х	х	х

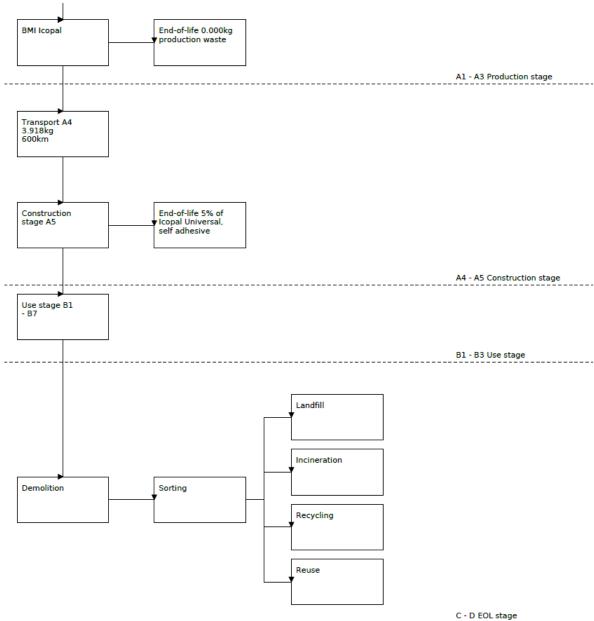
X = Modules Assessed

ND = Not Declared









LCA process diagram according to EN 15804 (7.2.1)



REPRESENTATIVENESS

The input data is representative of Icopal Universal SA (self adhesive), a product of BMI Icopal. The data is representative for the production in Groningen, the Netherlands and application in the EU.







ENVIRONMENTAL IMPACT per functional unit or declared unit (indicators A1)

	UNIT	A1	A2	А3	A1-A3	A4	A5	B1	B2	В3	C1	C2	C3	C4	D
ADPE	kg Sb eq.	2.74	6.41	3.84	3.77	1.04	1.13	0.00	0.00	0.00	0.00	3.19	3.80	1.72	5.29
ADPE	kg Sb eq.	E-5	E-6	E-6	E-5	E-5	E-5	0.00	0.00	0.00	0.00	E-6	E-6	E-7	E-6
ADPF	MJ	1.56	4.08	9.44	1.69	5.70	3.58	0.00	0.00	0.00	0.00	1.31	3.19	3.81	-5.74
ADFI	IVIS	E+2	E+0	E+0	E+2	E+0	E+1	0.00	0.00	0.00	0.00	E+0	E+0	E-1	E+1
GWP	kg CO2 eq.	3.13	2.72	5.22	3.93	3.80	2.17	0.00	0.00	0.00	0.00	8.84	4.20	1.92	-2.47
GWF	kg CO2 eq.	E+0	E-1	E-1	E+0	E-1	E+0	0.00	0.00	0.00	0.00	E-2	E+0	E-1	E+0
ODP	kg CFC11 eg.	1.27	4.77	5.67	1.37	6.95	3.69	0.00	0.00	0.00	0.00	1.57	3.14	3.97	-4.46
ODF	kg Ci Ci i eq.	E-6	E-8	E-8	E-6	E-8	E-7	0.00	0.00	0.00	0.00	E-8	E-8	E-9	E-7
POCP	kg ethene eg.	3.46	1.86	5.60	4.21	1.93	2.01	0.00	0.00	0.00	0.00	4.37	2.03	4.70	-2.76
FOCE	kg ethene eq.	E-3	E-4	E-4	E-3	E-4	E-2	0.00	0.00	0.00	0.00	E-5	E-4	E-5	E-4
AP	kg SO2 eq.	1.71	1.85	1.62	2.05	1.22	4.70	0.00	0.00	0.00	0.00	2.80	1.37	1.99	-1.38
AF	kg 302 eq.	E-2	E-3	E-3	E-2	E-3	E-3	0.00	0.00	0.00	0.00	E-4	E-3	E-4	E-3
EP	kg (PO4)3- eq.	2.40	2.95	2.79	2.98	2.23	7.15	0.00	0.00	0.00	0.00	5.01	2.39	8.95	-2.96
LIP	ку (г 04)3- ец.	E-3	E-4	E-4	E-3	E-4	E-4	0.00	0.00	0.00	0.00	E-5	E-4	E-5	E-4

Toxicity indicators for Dutch market

HTP	kg DCB eg.	1.67	1.19	2.42	2.03	1.51	6.03	0.00	0.00	0.00	0.00	3.28	3.15	9.37	-1.02
піг	ку БСВ ец.	E+0	E-1	E-1	E+0	E-1	E-1	0.00	0.00	0.00	0.00	E-2	E-1	E-3	E-1
FAETP	kg DCB eg.	6.34	3.25	6.75	7.34	4.18	2.03	0.00	0.00	0.00	0.00	9.00	7.48	2.13	-2.37
IALIF	kg DCB eq.	E-2	E-3	E-3	E-2	E-3	E-2	0.00	0.00	0.00	0.00	E-4	E-3	E-3	E-3
MAETP	kg DCB eg.	1.45	1.20	1.16	1.69	1.60	5.32	0.00	0.00	0.00	0.00	3.37	1.74	2.40	-8.91
IVIALIF	kg DCB eq.	E+2	E+1	E+1	E+2	E+1	E+1	0.00	0.00	0.00	0.00	E+0	E+1	E+0	E+0
TETP	kg DCB eg.	1.25	4.09	2.19	1.51	5.36	1.85	0.00	0.00	0.00	0.00	1.28	8.92	2.78	-2.54
ILIF	ку БСБ еч.	E-2	E-4	E-3	E-2	E-4	E-3	0.00	0.00	0.00	0.00	E-4	E-4	E-5	E-4
ECI	Euro	4.33	3.64	6.02	5.30	4.21	2.37	0.00	0.00	0.00	0.00	9.50	2.49	1.25	-1.47
Loi	Luio	E-1	E-2	E-2	E-1	E-2	E-1	0.00	0.00	0.00	0.00	E-3	E-1	E-2	E-1
ADPF	kg Sb. eq.	7.50	1.96	4.54	8.15	2.74	1.72	0.00	0.00	0.00	0.00	6.30	1.53	1.83	-2.76
ADFI	ng ob. eq.	E-2	E-3	E-3	E-2	E-3	E-2	0.00	0.00	0.00	0.00	E-4	E-3	E-4	E-2

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 expressed in [kg Sb-eq.]







ENVIRONMENTAL IMPACT per functional unit or declared unit (core indicators A2)

	UNIT	A1	A2	А3	A1-A3	A4	A5	B1	B2	В3	C1	C2	СЗ	C4	D
GWP-total	ka CO2 oa	3.24	2.74	2.13	3.73	3.84	2.19	0.00	0.00	0.00	0.00	8.93	4.21	2.24	-2.50
GWP-total	kg CO2 eq.	E+0	E-1	E-1	E+0	E-1	E+0	0.00	0.00	0.00	0.00	E-2	E+0	E-1	E+0
GWP-fossil	kg CO2 eg.	3.25	2.74	5.30	4.05	3.84	2.20	0.00	0.00	0.00	0.00	8.92	4.21	2.24	-2.50
GWF-1055II	kg CO2 eq.	E+0	E-1	E-1	E+0	E-1	E+0	0.00	0.00	0.00	0.00	E-2	E+0	E-1	E+0
GWP-biogenic	kg CO2 eg.	-1.19	1.04	-3.18	-3.29	2.05	-5.83	0.00	0.00	0.00	0.00	4.41	-3.27	1.42	2.71
GVVF-blogefile	kg CO2 eq.	E-2	E-4	E-1	E-1	E-4	E-3	0.00	0.00	0.00	0.00	E-5	E-4	E-4	E-4
GWP-luluc	kg CO2 eq.	3.60	1.10	5.98	4.31	1.34	5.24	0.00	0.00	0.00	0.00	3.83	1.85	8.16	6.37
GVVF-Iuluc	kg CO2 eq.	E-3	E-4	E-4	E-3	E-4	E-4	0.00	0.00	0.00	0.00	E-5	E-4	E-6	E-5
ODP	kg CFC11 eq.	1.57	5.99	6.57	1.69	8.71	4.57	0.00	0.00	0.00	0.00	1.97	3.47	4.94	-5.25
ODF	kg Cl Cl l eq.	E-6	E-8	E-8	E-6	E-8	E-7	0.00	0.00	0.00	0.00	E-8	E-8	E-9	E-7
AP	mol H+ eq.	2.02	2.40	2.01	2.46	1.57	5.66	0.00	0.00	0.00	0.00	3.58	1.79	2.42	-1.81
AF	morrif eq.	E-2	E-3	E-3	E-2	E-3	E-3	0.00	0.00	0.00	0.00	E-4	E-3	E-4	E-3
EP-freshwater	kg PO4 eq.	6.26	2.59	2.06	8.57	3.01	1.86	0.00	0.00	0.00	0.00	8.14	5.88	3.17	5.16
Li -ilesiiwatei	kg i O+ eq.	E-5	E-6	E-5	E-5	E-6	E-5	0.00	0.00	0.00	0.00	E-7	E-6	E-7	E-6
EP-marine	kg N eq.	2.86	7.40	4.27	4.03	4.65	1.03	0.00	0.00	0.00	0.00	1.03	5.51	1.92	-6.00
Li -ilialille	kg IV eq.	E-3	E-4	E-4	E-3	E-4	E-3	0.00	0.00	0.00	0.00	E-4	E-4	E-4	E-4
EP-terrestrial	mol N eq.	3.22	8.18	4.85	4.52	5.14	1.11	0.00	0.00	0.00	0.00	1.14	6.08	5.17	-6.62
LF-terrestrial	morn eq.	E-2	E-3	E-3	E-2	E-3	E-2	0.00	0.00	0.00	0.00	E-3	E-3	E-4	E-3
POCP	kg NMVOC eg.	1.40	2.26	1.61	1.79	1.57	4.52	0.00	0.00	0.00	0.00	3.49	1.74	2.03	-2.07
1 001	kg Milivoc eq.	E-2	E-3	E-3	E-2	E-3	E-2	0.00	0.00	0.00	0.00	E-4	E-3	E-4	E-3
ADP-minerals & metals	kg Sb eq.	2.74	6.41	3.84	3.76	1.04	1.13	0.00	0.00	0.00	0.00	3.19	3.80	1.72	5.29
ADF-IIIIIlerais & IIIelais	kg Sb eq.	E-5	E-6	E-6	E-5	E-5	E-5	0.00	0.00	0.00	0.00	E-6	E-6	E-7	E-6
ADP-fossil	MJ, net calorific	1.58	4.07	9.27	1.71	5.78	3.62	0.00	0.00	0.00	0.00	1.33	3.11	3.81	-5.21
ADI -103311	value	E+2	E+0	E+0	E+2	E+0	E+1	0.00	0.00	0.00	0.00	E+0	E+0	E-1	E+1
WDP	m3 world eq.	1.57	1.37	1.02	1.69	1.61	2.57	0.00	0.00	0.00	0.00	4.07	7.65	1.61	-9.05
VVDF	deprived	E+0	E-2	E-1	E+0	E-2	E-1	0.00	0.00	0.00	0.00	E-3	E-2	E-2	E-1

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 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 [2]

ADP-fossil = Abiotic Depletion for fossil resources potential [2]

WDP = Water (user) deprivation potential, deprivation-weighted water consumption [2]

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.







ENVIRONMENTAL IMPACT per functional unit or declared unit (additional indicators A2)

	UNIT	A1	A2	А3	A1-A3	A4	A5	B1	B2	В3	C1	C2	С3	C4	D
PM	Disease	1.32	2.29	4.38	1.98	2.67	4.62	0.00	0.00	0.00	0.00	5.45	2.04	2.67	3.00
FIVI	incidence	E-7	E-8	E-8	E-7	E-8	E-8	0.00	0.00	0.00	0.00	E-9	E-8	E-9	E-9
IRP	kBg U235 eg.	4.53	1.71	2.15	4.91	2.53	1.30	0.00	0.00	0.00	0.00	5.80	9.83	1.54	-7.26
IKF	кви 0235 ец.	E-1	E-2	E-2	E-1	E-2	E-1	0.00	0.00	0.00	0.00	E-3	E-3	E-3	E-1
ETP-fw	CTUe	7.37	3.53	8.79	8.60	4.63	2.19	0.00	0.00	0.00	0.00	1.12	4.11	5.10	-5.42
E I F-IW	Croe	E+1	E+0	E+0	E+1	E+0	E+1	0.00	0.00	0.00	0.00	E+0	E+0	E-1	E+0
HTP-c	CTUh	1.33	1.24	3.25	1.78	1.30	7.99	0.00	0.00	0.00	0.00	3.48	8.22	1.07	-5.70
HIF-C	Cron	E-9	E-10	E-10	E-9	E-10	E-10	0.00	0.00	0.00	0.00	E-11	E-10	E-11	E-11
HTP-nc	CTUh	4.07	3.79	6.16	5.06	5.05	1.45	0.00	0.00	0.00	0.00	1.18	6.83	2.18	-4.44
HIP-NC	CTOIL	E-8	E-9	E-9	E-8	E-9	E-8	0.00	0.00	0.00	0.00	E-9	E-9	E-10	E-10
SQP		1.59	3.24	3.19	5.10	3.99	7.76	0.00	0.00	0.00	0.00	7.91	2.42	8.90	-2.86
SQP		E+1	E+0	E+1	E+1	E+0	E+0	0.00	0.00	0.00	0.00	E-1	E+0	E-1	E+0

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 disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.

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.







RESOURCE USE per functional unit or declared unit (A1 / A2)

	UNIT	A1	A2	А3	A1-A3	Α4	A5	В1	B2	В3	C1	C2	С3	C4	D
PERE	MJ	2.14	4.87	5.54	7.73	8.16	7.23	0.00	0.00	0.00	0.00	2.25	1.69	8.03	3.56
PERE	IVIJ	E+0	E-2	E+0	E+0	E-2	E-1	0.00	0.00	0.00	0.00	E-2	E-1	E-3	E-2
PERM	MJ	0.00	0.00	4.35	4.35	0.00	2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-5.07
I LIXW	IVIO	0.00	0.00	E-2	E-2	0.00	E-3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	E-3
PERT	MJ	2.14	4.87	5.59	7.77	8.16	7.25	0.00	0.00	0.00	0.00	2.25	1.69	8.03	3.05
T EIXI	IVIO	E+0	E-2	E+0	E+0	E-2	E-1	0.00	0.00	0.00	0.00	E-2	E-1	E-3	E-2
PENRE	MJ	6.97	4.32	6.72	8.07	6.14	2.59	0.00	0.00	0.00	0.00	1.41	3.31	4.05	-5.01
I ENIXE	IVIO	E+1	E+0	E+0	E+1	E+0	E+0	0.00	0.00	0.00	0.00	E+0	E+0	E-1	E+1
PENRM	MJ	1.16	0.00	3.59	1.19	0.00	3.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-7.31
1 EIVIVIII	IVIO	E+2	0.00	E+0	E+2	0.00	E+1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	E+0
PENRT	MJ	1.85	4.32	1.03	2.00	6.14	3.94	0.00	0.00	0.00	0.00	1.41	3.31	4.05	-5.74
. =		E+2	E+0	E+1	E+2	E+0	E+1	0.00	0.00	0.00	0.00	E+0	E+0	E-1	E+1
SM	kg	6.57	0.00	1.71	6.74	0.00	3.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	9	E-1	0.00	E-2	E-1	0.00	E-2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RSF	MJ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NRSF	MJ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FW	m3	3.42	4.68	4.03	3.87	6.09	7.08	0.00	0.00	0.00	0.00	1.58	2.90	3.98	-2.08
. **	1113	E-2	E-4	E-3	E-2	E-4	E-3	0.00	0.00	0.00	0.00	E-4	E-3	E-4	E-2

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

NRSF = Use of non renewable secondary fuels

FW = Use of net fresh water

OUTPUT FLOWS AND WASTE CATEGORIES per functional unit or declared unit (A1 / A2)

	UNIT	A1	A2	А3	A1-A3	A4	A5	В1	B2	ВЗ	C1	C2	СЗ	C4	D
HWD	kg	4.51	9.68	6.59	6.14	1.52	1.88	0.00	0.00	0.00	0.00	3.56	5.16	5.76	-5.21
TIVE	, kg	E-5	E-6	E-6	E-5	E-5	E-5	0.00	0.00	0.00	0.00	E-6	E-6	E-7	E-5
NHWD	kg	1.29	2.34	9.93	4.63	2.76	7.05	0.00	0.00	0.00	0.00	5.25	2.21	1.50	3.49
MINVE	Ng	E-1	E-1	E-2	E-1	E-1	E-1	0.00	0.00	0.00	0.00	E-2	E-1	E+0	E-3
RWD	kg	6.97	2.69	3.59	7.59	3.94	2.01	0.00	0.00	0.00	0.00	8.95	1.19	2.29	-9.05
TWD	Ng	E-4	E-5	E-5	E-4	E-5	E-4	0.00	0.00	0.00	0.00	E-6	E-5	E-6	E-5
CRU	kg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MFR	kg	0.00	0.00	9.69 E-2	9.69 E-2	0.00	1.95 E-1	0.00	0.00	0.00	0.00	0.00	7.01 E-1	0.00	0.00
MER	kg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EEE	MJ	0.00	0.00	2.60 E-1	2.60 E-1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.22 E+1
ETE	MJ	0.00	0.00	4.48 E-1	4.48 E-1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.10 E+1

HWD = Hazardous Waste Disposed

RWD = Radioactive Waste Disposed

MFR = Materials for recycling

EEE = Exported Electrical Energy

NHWD = Non Hazardous Waste Disposed

CRU = Components for reuse

MER = Materials for energy recovery

ETE = Exported Thermal Energy









BIOGENIC CARBON CONTENT per functional unit or declared unit (A1 / A2)

	UNIT	A1	A2	А3	A1-A3	A4	A5	B1	B2	В3	C1	C2	С3	C4	D
BCCpr	kg C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ВССра	kg C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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



CALCULATION RULES

Production phase (A1-A3)

The production phase includes mining of raw materials, transportation of raw materials and processing of the raw materials into materials and production of the final product. Furthermore, the energy needs of production, external treatments, ancillary materials, packaging and production emissions are included.

Construction phase (A4-A5)

This phase involves the transport from the factory to the construction site and includes the losses at the construction site. The extra production, transport and end-of-life of material losses during the construction phase are included. The end of life of the packaging material up to the end of waste status or landfill is included. The installation of the product includes production, transportation and end-of-life of auxiliary materials and any energy or water used for the construction or management of the construction site.

Use phase (B)

This phase includes the environmental impact of building components or structures during use, including the planned maintenance that is necessary for the product to meet its functional and technical performance and to meet the aesthetic requirements. Energy consumption during use or water use is not included.

End of life (C) and environmental benefits and costs beyond system boundaries (D)

At the end of its life, Icopal Universal SA is fully recyclable. Due to the absence of a recycling facility in the UK we have to assume that the roofing membrane is dealt with according to the average EWA end of life scenario (• Incineration with energy recovery (45% of the product) and recycling (15% of the product – only sorting process considered) • Sanitary landfilling operations (40% of the product))









SCENARIOS AND ADDITIONAL TECHNICAL INFORMATION

Bitumen blends production

Bitumen blends are prepared and stored in big holding tanks at +/- 200°C, before being pumped to the production line. POCB blends consist of bitumen, polypropylene, limestone, and other additives. The dosage is controlled automatically. After mixing, a sample is lab tested and the batch is pumped into a coating storage tank.

Waterproofing production

The reinforcement is unrolled and runs through the production line: first an impregnation step, then the coating step where the bitumen blends are applied on each side. The reinforcement passes between two rollers that achieve the desired thickness. A polypropylene fleece is applied on the topside of the product. A bituminous adhesive coating is applied on the backside of the product; a removable PE foil is then applied on the adhesive coating.

The finished product is then cooled down, cut to length, rolled up and packed in a paper foil, before being put on pallets and supported with additional packaging (polyethylene shrink film) before being sent to customers. For both heating and cooling needed during production, coolants and hot oil are used in closed systems and is thus not consumed during the manufacturing process.

Installation step (A5):

The waterproofing membrane is attached onto the substrate that was beforehand prepared by applying a layer of Icopal SA primer.









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 exceeds the limit for registration.



REFERENCES

ISO 14040:2006-10, Environmental management - Life cycle assessment - Principles and framework; EN ISO 14040:2006

ISO 14044:2006-10, Environmental management - Life cycle assessment - Requirements and guidelines; EN ISO 14040:2006

ISO 14025:2011-10: Environmental labels and declarations – Type III environmental declarations – Principles and procedures

EN 15804+A1: 2013: Sustainability of construction works – Environmental Product Declarations – Core rules for the product category of construction products

EN 15804+A2: 2019: Sustainability of construction works – Environmental Product Declarations – Core rules for the product category of construction products"



REMARKS

None

