

# Environmental Product Declaration

*according to ISO 14025 and EN 15804*



This declaration is for:  
**Sealoflex Ultima**

Provided by:  
**BMI Group UK Limited**



program operator  
**Stichting MRPI®**  
publisher  
**Stichting MRPI®**  
[www.mrpi.nl](http://www.mrpi.nl)

MRPI® registration  
**1.1.00531.2024**  
date of first issue  
**16-04-2024**  
date of this issue  
**16-04-2024**  
expiry date  
**16-04-2029**





### COMPANY INFORMATION



BMI Group UK Limited  
BMI House, 2 Pitfield  
Kiln Farm  
Milton Keynes MK11 3LW  
UK

### PRODUCT

Sealoflex Ultima

### DECLARED UNIT/FUNCTIONAL UNIT

kg

### DESCRIPTION OF PRODUCT

One kilogram of construction material. If the lifespan, waste scenario, waste percentage or transport distance of the material differs in the various applications, several variants must be introduced.

### VISUAL PRODUCT



### MRPI® REGISTRATION

1.1.00531.2024

### DATE OF ISSUE

16-04-2024

### EXPIRY DATE

16-04-2029

### MORE INFORMATION

<https://www.bmigroup.com/uk/icopal-flat-roofing/liquid-waterproofing/sealoflex-ultima-modified-pu/>

### SCOPE OF DECLARATION

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. 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.

### PROGRAM OPERATOR

Stichting MRPI®  
Kingsfordweg 151  
1043GR  
Amsterdam

ing. L. L. Oosterveen MSc. MBA  
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:

Kamiel Jansen, Aveco de Bondt

[a] PCR = Product Category Rules

### DETAILED PRODUCT DESCRIPTION

The Sealoflex Ultima Liquid Applied Waterproofing System consists of a primer, a waterproofing resin, a polyester reinforcing fabric and an optional anti-skid surface layer (not part of the EPD). The main waterproofing component is a single component, moisture curing, solvent and VOC free waterproofing resin based on Silane Modified Polymer technology. This resin or coating is supplied in 4L or 15L containers (metal or plastic depending on market). All data, including the reinforcement and primer have been calculated based on 1 kg of the resin. In practice two systems are used, one with 1.8kg/m<sup>2</sup> and another one with 3.2 kg/m<sup>2</sup>.

The Sealoflex Ultima System is certified by the BBA: Cert 15/5229; and EOTA: ETA-19/0536. The product is sold in Germany under the Klobler Enfiroflex Brand. Production is made by mixing raw materials in a mixing vessel under controlled temperature and it is a multi step process where speed of mixing varies. under vacuum. The total manufacturing time is between 5 and 8h.

COMPONENT > 1% of total mass	[%]
resin	Confidential
fabric	Confidential
Other	Confidential

### SCOPE AND TYPE

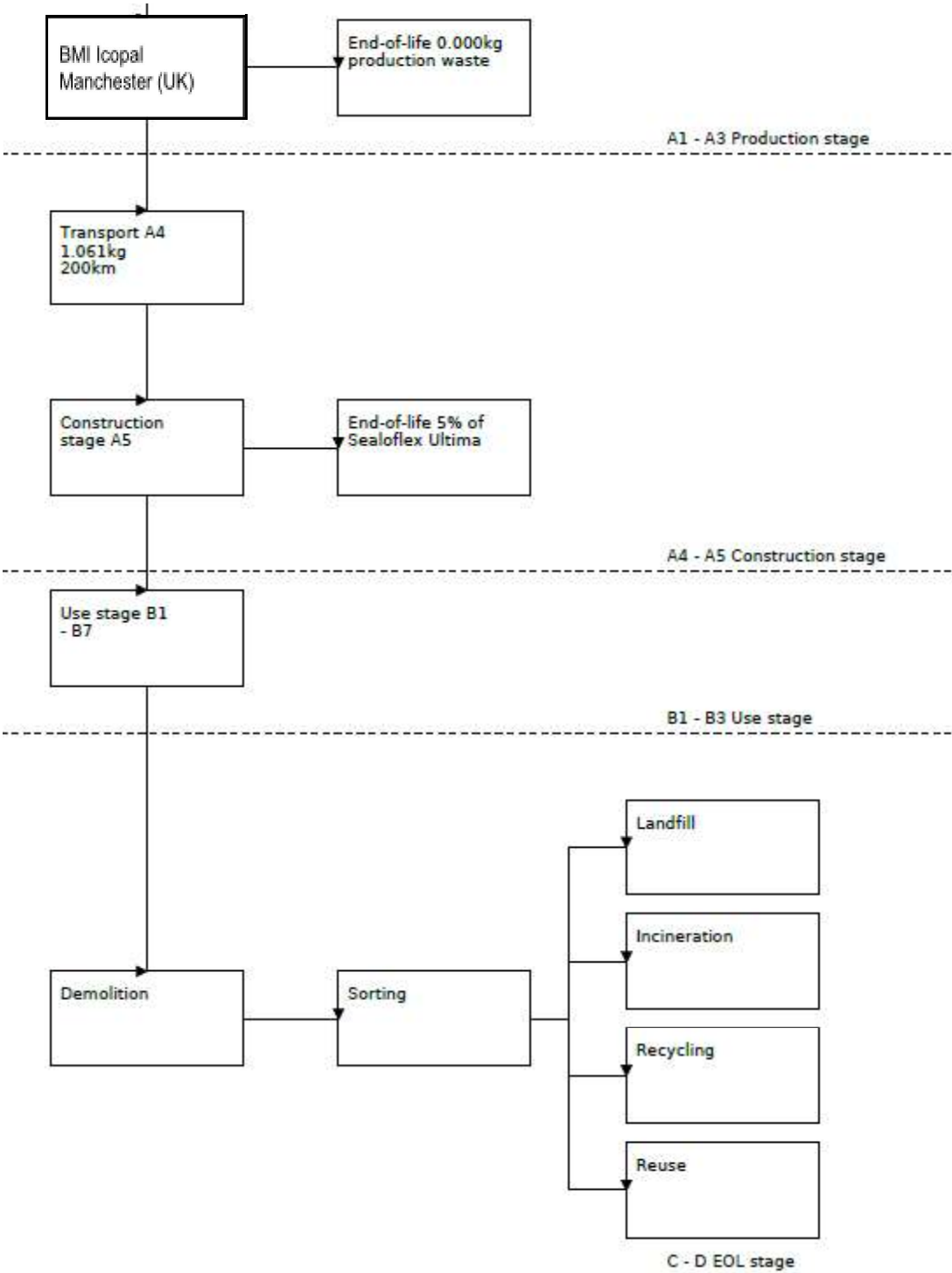
This specific EPD is relevant for Sealoflex Ultima, a product from BMI Group manufacturing UK Ltd, to be sold at the European market. Background database is Eco Invent 3.6. For end of life we have used the waste scenario Waste scenario liquid applied systems | 100% landfill

PROCESS STAGE	USE STAGE													END OF LIFE			BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARIES		
	A					B					C			D					
	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1		C2	C3		C4	
Raw material supply																			
Transport																			
Manufacturing																			
Transport gate to site																			
Assembly																			
Use																			
Maintenance																			
Repair																			
Replacement																			
Refurbishment																			
Operational energy use																			
Operational water use																			
De-contruction demolition																			
Transport																			
Waste processing																			
Disposal																			
Reuse- Recovery- Recycling- potential																			
	x	x	x	x	x	x	x	x	ND	ND	ND	ND	x	x	x	x			x

X = Modules Assessed

ND = Not Declared

# LCA Process Diagram



### REPRESENTATIVENESS

The data are representative for Sealoflex Ultima, a product from BMI Group manufacturing UK Ltd, to be sold at the European market.

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

	UNIT	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	C1	C2	C3	C4	D
ADPE	kg Sb eq.	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0
ADPF	MJ	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0
GWP	kg CO2 eq.	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0
ODP	kg CFC11 eq.	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0
POCP	kg ethene eq.	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0
AP	kg SO2 eq.	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0
EP	kg (PO4)3- eq.	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0

Toxicity indicators for Dutch market

HTP	kg DCB eq.	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0
FAETP	kg DCB eq.	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0
MAETP	kg DCB eq.	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0
TETP	kg DCB eq.	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0
ECI	Euro	4.88 E+0	9.26 E-2	1.54 E-1	5.13 E+0	2.87 E-2	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	1.57 E-2	1.51 E+0	0.00 E+0	0.00 E+0
ADPF	kg Sb. eq.	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0

- 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	A3	A1-A3	A4	A5	B1	B2	B3	C1	C2	C3	C4	D
GWP-total	kg CO2 eq.	4.88 E+0	9.26 E-2	1.54 E-1	5.13 E+0	2.87 E-2	1.01 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	1.57 E-2	1.51 E+0	2.96 E-2	-1.01 E-1
GWP-fossil	kg CO2 eq.	4.91 E+0	9.25 E-2	1.99 E-1	5.20 E+0	2.86 E-2	9.62 E-1	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	1.56 E-2	1.51 E+0	2.96 E-2	-1.01 E-1
GWP-biogenic	kg CO2 eq.	-2.33 E-2	4.27 E-5	-4.44 E-2	-6.77 E-2	1.32 E-5	4.67 E-2	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	7.22 E-6	2.31 E-4	3.60 E-5	-2.27 E-4
GWP-luluc	kg CO2 eq.	1.73 E-3	3.39 E-5	2.14 E-4	1.98 E-3	1.05 E-5	5.42 E-4	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	5.73 E-6	2.17 E-5	1.65 E-6	-2.40 E-5
ODP	kg CFC11 eq.	1.03 E-4	2.04 E-8	1.57 E-8	1.03 E-4	6.32 E-9	5.25 E-6	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	3.45 E-9	6.98 E-9	1.06 E-9	-3.91 E-8
AP	mol H+ eq.	1.38 E-2	5.37 E-4	7.91 E-4	1.52 E-2	1.66 E-4	3.25 E-3	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	9.07 E-5	4.34 E-4	3.25 E-5	-2.78 E-4
EP-freshwater	kg PO4 eq.	1.47 E-2	9.33 E-7	6.24 E-6	1.47 E-2	2.89 E-7	7.59 E-4	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	1.58 E-7	8.47 E-7	6.09 E-8	-4.47 E-7
EP-marine	kg N eq.	2.39 E-3	1.89 E-4	1.39 E-4	2.71 E-3	5.85 E-5	5.42 E-4	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	3.20 E-5	1.42 E-4	1.93 E-5	-5.82 E-5
EP-terrestrial	mol N eq.	2.36 E-2	2.08 E-3	1.61 E-3	2.73 E-2	6.45 E-4	6.02 E-3	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	3.52 E-4	1.57 E-3	1.10 E-4	-7.10 E-4
POCP	kg NMVOC eq.	7.68 E-3	5.95 E-4	5.93 E-4	8.87 E-3	1.84 E-4	6.61 E-3	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	1.01 E-4	4.21 E-4	3.79 E-5	-2.27 E-4
ADP-minerals & metals	kg Sb eq.	1.81 E-5	2.34 E-6	1.69 E-6	2.22 E-5	7.26 E-7	5.74 E-6	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	3.96 E-7	3.96 E-7	3.66 E-8	-1.30 E-7
ADP-fossil	MJ, net calorific value	1.87 E+1	1.40 E+0	5.47 E+0	2.55 E+1	4.32 E-1	1.11 E+1	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	2.36 E-1	3.45 E-1	8.09 E-2	-3.28 E+0
WDP	m3 world eq. deprived	1.85 E+0	4.99 E-3	6.98 E-2	1.93 E+0	1.55 E-3	2.82 E-1	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	8.44 E-4	1.27 E-2	3.47 E-3	-1.02 E-2

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	A3	A1-A3	A4	A5	B1	B2	B3	C1	C2	C3	C4	D
PM	Disease incidence	2.28 E-7	8.32 E-9	5.11 E-9	2.42 E-7	2.58 E-9	3.08 E-8	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	1.41 E-9	3.52 E-9	5.64 E-10	-1.40 E-9
IRP	kBq U235 eq.	6.98 E-2	5.85 E-3	3.99 E-2	1.15 E-1	1.81 E-3	4.68 E-2	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	9.88 E-4	1.21 E-3	3.18 E-4	-8.21 E-3
ETP-fw	CTUe	1.15 E+2	1.24 E+0	2.25 E+0	1.18 E+2	3.85 E-1	1.92 E+1	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	2.10 E-1	6.49 E-1	1.12 E+0	-1.38 E+0
HTP-c	CTUh	5.29 E-9	4.04 E-11	8.19 E-11	5.41 E-9	1.25 E-11	5.83 E-10	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	6.82 E-12	2.22 E-10	2.39 E-12	-1.63 E-11
HTP-nc	CTUh	7.19 E-8	1.36 E-9	1.84 E-9	7.51 E-8	4.21 E-10	1.32 E-8	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	2.30 E-10	1.34 E-9	2.26 E-10	-4.64 E-10
SQP	---	6.62 E+0	1.21 E+0	6.85 E+0	1.47 E+1	3.75 E-1	3.13 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	2.05 E-1	2.47 E-1	1.92 E-1	-1.97 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	A3	A1-A3	A4	A5	B1	B2	B3	C1	C2	C3	C4	D
PERE	MJ	2.16 E+0	1.75 E-2	9.30 E-1	3.11 E+0	5.41 E-3	8.83 E-1	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	2.95 E-3	2.30 E-2	1.43 E-3	-3.72 E-1
PERM	MJ	0.00 E+0	0.00 E+0	3.61 E-1	3.61 E-1	0.00 E+0	1.80 E-2	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0
PERT	MJ	2.16 E+0	1.75 E-2	1.29 E+0	3.47 E+0	5.41 E-3	9.01 E-1	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	2.95 E-3	2.30 E-2	1.43 E-3	-3.72 E-1
PENRE	MJ	4.01 E+1	1.48 E+0	4.66 E+0	4.62 E+1	4.59 E-1	8.19 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	2.50 E-1	3.67 E-1	8.60 E-2	-2.32 E+0
PENRM	MJ	8.85 E+0	0.00 E+0	1.16 E+0	1.00 E+1	0.00 E+0	5.06 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	-1.23 E+0
PENRT	MJ	4.89 E+1	1.48 E+0	5.82 E+0	5.62 E+1	4.59 E-1	1.33 E+1	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	2.50 E-1	3.67 E-1	8.60 E-2	-3.55 E+0
SM	kg	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0
RSF	MJ	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0
NRSF	MJ	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0
FW	m3	4.00 E-2	1.70 E-4	1.81 E-3	4.20 E-2	5.26 E-5	8.56 E-3	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	2.87 E-5	6.47 E-4	8.46 E-5	-3.27 E-4

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	A3	A1-A3	A4	A5	B1	B2	B3	C1	C2	C3	C4	D
HWD	kg	2.81 E-5	3.54 E-6	3.87 E-6	3.55 E-5	1.09 E-6	7.03 E-6	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	5.98 E-7	6.35 E-7	1.23 E-7	-2.27 E-6
NHWD	kg	3.50 E-1	8.85 E-2	1.34 E-2	4.52 E-1	2.74 E-2	2.24 E-1	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	1.50 E-2	4.34 E-2	3.24 E-1	-1.70 E-3
RWD	kg	8.09 E-5	9.16 E-6	2.23 E-5	1.12 E-4	2.84 E-6	4.93 E-5	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	1.55 E-6	1.32 E-6	4.83 E-7	-1.33 E-5
CRU	kg	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0
MFR	kg	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	6.78 E-3	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	3.56 E-2	0.00 E+0	0.00 E+0
MER	kg	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0
EEE	MJ	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	4.12 E-1
ETE	MJ	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	7.10 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	A3	A1-A3	A4	A5	B1	B2	B3	C1	C2	C3	C4	D
BCCpr	kg C	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0
BCCpa	kg C	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0	0.00 E+0

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

## CALCULATION RULES

*Applicable time period collected data*  
 2020

## SCENARIOS AND ADDITIONAL TECHNICAL INFORMATION

### *Product Stage (A1-A3)*

The production stage consists of the extraction of raw materials, transportation of the raw materials, processing the raw materials into materials and the production of the product. The required energy for production, external treatments, ancillary materials, packaging material and production emissions are included.

### *Construction process stage (A4-A5)*

This stage consists the transport of the product from production plant to the construction site. It also includes the loss of material during construction. The additional needed production, transport and end-of-life of the lost material during construction is included. The end-of-life of packaging material up to the end-of-waste state or disposal of final residues is also included.

The installation of the product including manufacture, transportation and end-of-life of ancillary materials and any energy or water use required for installation or operation of the construction site are taken into account.

### *Use stage (B1-B3)*

This stage consists of the impacts arising from components of the building and construction works during their use. The stage also covers the combination of all planned technical and associated administrative maintenance actions during the service life to maintain the product installed in a building, in a construction works or its parts in a state in which it can perform its required functional and technical performance, as well as preserve the aesthetic qualities of the product. This will include preventative and regular maintenance activities. Product replacement (B4) and renovation (B5) only apply when the product is considered in a lifespan (of a building, work , etc.). Operational water and energy use are not considered. Dispersion-based products in outdoor applications, like Sealoflex Ultima, are not used in areas with contact to soil and groundwater. According to the sector organisation, FEICA, there are currently no European or national assessment criteria or emission scenarios in place for scenarios involving watered components.

### *End of life stage (C1-C4)*

When the end of the life stage of the building is reached, the de-construction/demolition begins. This EPD includes de-construction/demolition (C1), the necessary transport (C2) from the demolition site to the sorting location and distance to final disposal. The end of life stage includes the final disposal

to landfill (C4), incineration (C3) and needed recycling processes up to the end-of-waste point (C3). Loads and benefits of recycling, re-use and exported energy are part of module D. The default end-of-life scenarios of the annex (november 2020) to the NMD Determination method v1.0 have been used for the various materials in the product.

*Benefits and Loads beyond the system boundary (Module D)*

This stage contains the potential loads and benefits of recycling and re-use of raw materials/products. The loads contain the needed recycling processes from end-of-waste-point up to the point-of-equivalence of the substituted primary raw material and a load for secondary material that will be lost at the end-of-life stage. The loads and benefits of recycling and reuse are included in this module. The benefits are calculated based on the primary content and the primary equivalent. In addition, the benefits of energy recovery are granted at this stage. The amount of avoided energy is based on the Lower Heating Values of the materials and the efficiencies of the incinerators as mentioned in the NMD Determination method v1.0 or EcoInvent 3.6 (2019).



**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 - DIN EN ISO 14040:2006-10, Environmental management - Life cycle assessment - Principles and framework; EN ISO 14040:2006  
ISO 14044 - DIN EN ISO 14044:2006-10, Environmental management - Life cycle assessment - Requirements and guidelines; EN ISO 14040:2006  
ISO 14025 - DIN EN ISO 14025:2011-10: Environmental labels and declarations – Type III environmental declarations – Principles and procedures  
EN 15804- EN 15804:2012+A2:2019: Sustainability of construction works – Environmental Product



**REMARKS**

none