



**Environmental
Product
Declaration**

According to EN15804+A2 (+indicators A1)
and ISO 14025



This declaration is for:
Multitherm Bandage

Provided by:
Mulcol International

MULCOL
FIRE PROTECTION



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

MRPI® registration
1.1.00593.2024
date of first issue
12-7-2024
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COMPANY INFORMATION



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MRPI® REGISTRATION

1.1.00593.2024

DATE OF ISSUE

12-7-2024

EXPIRY DATE

12-7-2029

SCOPE OF DECLARATION

This MRPI®-EPD certificate is verified by Anne Kees Jeeninga, Advieslab VOF. The LCA study has been done by Martijn Blaak, EcoReview. 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'. EPD's 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

Ing. L. L. Oosterveen MSc. MBA
Managing Director MRPI

PRODUCT

Multitherm Bandage

DECLARED UNIT/FUNCTIONAL UNIT

1 piece

DESCRIPTION OF PRODUCT

The Multitherm Bandage is a fire-resistant insulation.

VISUAL PRODUCT



MORE INFORMATION

<https://www.mulcol.com/multitherm-bandage>

DEMONSTRATION OF VERIFICATION

CEN standard EN15804 serves as the core PCR(a)

Independent verification of the declaration an data according to EN15804+A2 (+indicators A1)

internal: external: x

Third party verifier: Anne Kees Jeeninga, Advieslab VOF

[a] PCR = Product Category Rules

DETAILED PRODUCT DESCRIPTION

Multitherm Bandage is a self-adhesive thermal insulation product on a roll, especially developed for the thermal and fire-resistant insulation of, for instance, metal pipes at short distances from the fire-resistant partition. Multitherm Bandage absorbs the temperature of the pipe, so that no temperature to adjacent rooms can take place. The reference service life of Multitherm Bandage is 30 years.

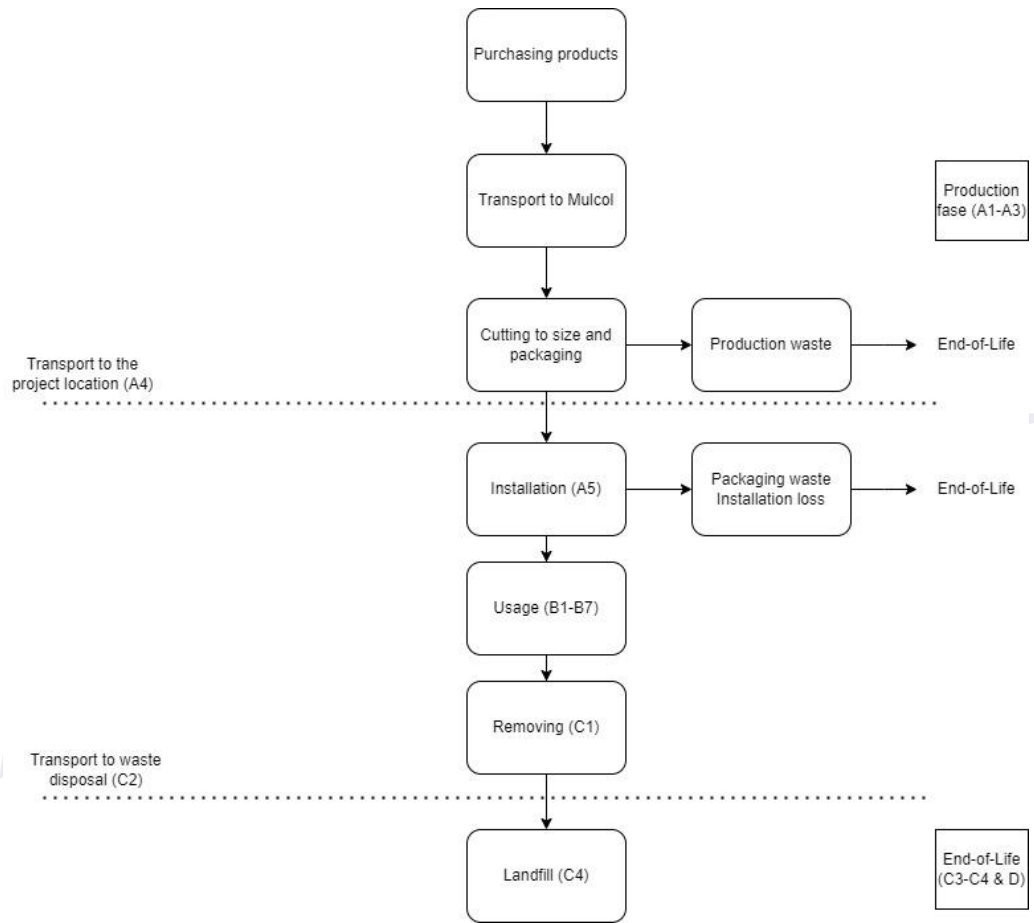
Component (> 1%)	(kg / %)
Bandage	99,00%
PP layer	1,00%

SCOPE AND TYPE

The LCA study is a cradle-to-grave (A-D) in accordance with the EN15804+A2 and the Dutch Determination method (Bepalingsmethode "Milieuprestatie Bouwwerken" versie 1.1 march 2022). The product is produced in the Netherlands and application of the results is only representable for products sold from the Kaatsheuvel facility. Simapro 9.5.0.0 software was used, using NMD 3.7 and Ecoinvent 3.6 databases.

PRODUCT STAGE			CONSTRUCTION PROCESS STAGE		USER 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	X	X	X	X	X	X	X

X= Modules Assessed
ND= Not Declared



REPRESENTATIVENESS

None.

ENVIRONMENT IMPACT per functional unit or declared unit (core 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.	3,94 E-05	8,40 E-08	0,00 E+00	3,95 E-05	6,97 E-08	1,98 E-06	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	5,63 E-08	0,00 E+00	4,19 E-08	-9,94 E-09
ADPF	MJ	2,78 E+01	7,56 E-02	0,00 E+00	2,79 E+01	6,30 E-02	1,37 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	3,37 E-02	0,00 E+00	7,96 E-02	-7,07 E-01
GWP	kg CO2 eq.	8,27 E-01	4,89 E-03	0,00 E+00	8,32 E-01	4,06 E-03	4,53 E-02	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	2,20 E-03	0,00 E+00	1,04 E-01	-3,71 E-02
ODP	Kg CFC11 eq.	1,11 E-07	9,26 E-10	0,00 E+00	1,12 E-07	7,69 E-10	5,47 E-09	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	3,91 E-10	0,00 E+00	9,89 E-10	-4,30 E-09
POCP	kg ethene eq.	7,05 E-04	3,05 E-06	0,00 E+00	7,08 E-04	2,47 E-06	3,58 E-05	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	1,33 E-06	0,00 E+00	1,00 E-05	-5,24 E-06
AP	kg SO2 eq.	3,57 E-03	1,80 E-05	0,00 E+00	3,59 E-03	1,06 E-05	1,82 E-04	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	9,69 E-06	0,00 E+00	4,98 E-05	-2,39 E-05
EP	kg (PO4) 3- eq.	4,08 E-04	3,50 E-06	0,00 E+00	4,12 E-04	1,74 E-06	2,15 E-05	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	1,90 E-06	0,00 E+00	1,86 E-05	-3,46 E-06

Toxicity indicators for Dutch market

HTP	kg DCB-Eq	2,89 E-01	1,06 E-03	0,00 E+00	2,90 E-01	8,73 E-04	1,46 E-02	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	9,28 E-04	0,00 E+00	3,05 E-03	-1,92 E-03
FAETP	kg DCB-Eq	7,18 E-03	4,44 E-05	0,00 E+00	7,23 E-03	3,67 E-05	3,87 E-04	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	2,71 E-05	0,00 E+00	4,65 E-04	-1,94 E-05
MAETP	kg DCB-Eq	2,47 E+01	1,19 E-01	0,00 E+00	2,49 E+01	9,94 E-02	1,28 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	9,74 E-02	0,00 E+00	6,15 E-01	-8,67 E-02
TETP	kg DCB-Eq	1,07 E-03	5,93 E-06	0,00 E+00	1,08 E-03	4,93 E-06	5,44 E-05	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	3,28 E-06	0,00 E+00	7,03 E-06	-6,01 E-06
ECI	euro	9,16 E-02	4,69 E-04	0,00 E+00	9,21 E-02	3,61 E-04	4,82 E-03	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	2,66 E-04	0,00 E+00	5,96 E-03	-2,23 E-03
ADPF	kg Sb eq.	1,34 E-02	3,64 E-05	0,00 E+00	1,34 E-02	3,03 E-05	6,57 E-04	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	1,62 E-05	0,00 E+00	3,83 E-05	-3,40 E-04

- 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.]

ENVIRONMENT 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.	8,36 E-01	4,93E-03	0,00 E+00	8,41 E-01	4,09 E-03	4,69 E-02	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	2,22 E-03	0,00 E+00	1,10 E-01	-3,76 E-02
GWP-fossil	kg CO2 eq.	8,53 E-01	4,93E-03	0,00 E+00	8,57 E-01	4,09 E-03	4,68 E-02	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	2,22 E-03	0,00 E+00	1,10 E-01	-3,76 E-02
GWP-biogenic	kg CO2 eq.	-1,73 E-02	2,44E-06	0,00 E+00	-1,73 E-02	1,97 E-06	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	1,03 E-06	0,00 E+00	3,89 E-05	-9,82 E-06
GWP-luluc	kg CO2 eq.	5,75 E-04	1,23E-06	0,00 E+00	5,76 E-04	1,02 E-06	2,90 E-05	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	8,14 E-07	0,00 E+00	2,13 E-06	-1,07 E-06
ODP	kg CFC11 eq.	1,35 E-07	1,16E-09	0,00 E+00	1,36 E-07	9,16 E-09	6,67 E-09	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	4,91 E-10	0,00 E+00	1,17 E-09	-4,89 E-09
AP	mol H+ eq.	4,28 E-03	2,37E-05	0,00 E+00	4,31 E-03	1,32 E-05	2,18 E-04	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	1,29 E-05	0,00 E+00	6,20 E-05	-3,07 E-05
EP-freshwater	kg PO4 eq.	2,60 E-05	3,40E-08	0,00 E+00	2,61 E-05	2,85 E-08	1,31 E-06	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	2,24 E-08	0,00 E+00	8,67 E-08	-4,05 E-08
EP-marine	kg N eq.	7,09 E-04	7,86E-06	0,00 E+00	7,17 E-04	3,02 E-06	3,78 E-05	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	4,54 E-06	0,00 E+00	4,07 E-05	-9,23 E-06
EP-terrestrial	mol N eq.	7,98 E-03	8,67E-05	0,00 E+00	8,07 E-03	3,40 E-05	4,11 E-04	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	5,01 E-05	0,00 E+00	1,61 E-04	-1,01 E-04
POCP	kg NMVOC eq.	3,17 E-03	2,63E-05	0,00 E+00	3,20 E-03	1,27 E-05	1,62 E-04	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	1,43 E-05	0,00 E+00	5,44 E-05	-3,35 E-05
ADP-minerals & metals	kg Sb eq.	3,94 E-05	8,40E-08	0,00 E+00	3,95 E-05	6,97 E-08	1,98 E-06	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	5,63 E-08	0,00 E+00	4,19 E-08	-9,94 E-09
ADP-fossil	MJ, net calorific value	2,72 E+01	7,64E-02	0,00 E+00	2,73 E+01	6,36 E-02	1,34 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	3,35 E-02	0,00 E+00	7,86 E-02	-6,28 E-01
WDP	m3 world eq. Deprived	4,48 E-01	2,39E-04	0,00 E+00	4,48 E-01	2,70 E-04	2,25 E-02	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	1,20 E-04	0,00 E+00	3,38 E-03	-2,73 E-03

- 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.

ENVIRONMENT 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	3,33 E-08	3,65 E-10	0,00 E+00	3,37 E-08	2,84 E-10	1,73 E-09	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	2,00 E-10	0,00 E+00	6,14 E-10	-8,69 E-11
IRP	kBq U235 eq.	5,07 E-02	3,29 E-04	0,00 E+00	5,10 E-02	2,73 E-04	2,58 E-03	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	1,40 E-04	0,00 E+00	3,15 E-04	-2,02 E-04
ETP -fw	CTUe	1,57 E+01	5,58 E-02	0,00 E+00	1,57 E+01	4,64 E-02	7,95 E-01	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	2,99 E-02	0,00 E+00	1,15 E-01	-3,64 E-02
HTP -c	CTUh	3,10 E-10	1,43 E-12	0,00 E+00	3,11 E-10	1,17 E-12	1,61 E-11	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	9,70 E+13	0,00 E+00	1,16 E-11	-2,37 E-12
HTP -nc	CTUh	8,62 E-09	4,75 E-11	0,00 E+00	8,67 E-09	3,74 E-11	4,40 E-10	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	3,27 E+11	0,00 E+00	9,27 E-11	-3,35 E-11
SQP	----	4,27 E+00	8,81 E-02	0,00 E+00	4,35 E+00	7,27 E-02	2,31 E-01	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	2,91 E+02	0,00 E+00	1,67 E-01	-9,04 E-03

- 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 / A2)

	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
HWD	kg	7,68 E-06	1,90 E-07	0,00 E+00	7,87 E-06	1,57 E-07	3,72 E-07	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	8,49 E-08	0,00 E+00	1,24 E-07	-7,95 E-07
NHWD	kg	7,07 E-02	6,71 E-03	0,00 E+00	7,74 E-02	5,53 E-03	1,78 E-02	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	2,13 E-03	0,00 E+00	2,72 E-01	-2,52 E-04
RWD	kg	6,65 E-05	5,21 E-07	0,00 E+00	6,70 E-05	4,32 E-07	3,39 E-06	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	2,20 E-07	0,00 E+00	4,51 E-07	-3,00 E-07
CRU	kg	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00
MFR	kg	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00
MER	kg	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00
EEE	MJ	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00
ETE	MJ	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+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 / A2)

	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00
PERM	MJ	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00
PERT	MJ	8,46 E-01	7,75 E-04	0,00 E+00	8,47 E-01	6,52 E-04	4,25 E-02	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	4,20 E-04	0,00 E+00	2,22 E-03	-1,33 E-03
PENRE	MJ	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00
PENRM	MJ	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00
PENRT	MJ	2,90 E+01	8,11 E-02	0,00 E+00	2,91 E+01	6,75 E-02	1,43 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	3,56 E-02	0,00 E+00	8,36 E-02	-6,97 E-01
SM	kg	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00
RSF	MJ	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00
NRSF	MJ	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00
FW	m3	1,13 E-02	7,76 E-06	0,00 E+00	1,13 E-02	8,12 E-06	5,70 E-04	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	4,08 E-06	0,00 E+00	9,86 E-05	-3,62 E-05

- 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

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

	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
BBCpr	Kg C	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0E +00	0E +00	0E +00	0E +00	0E +00	0E +00	0E +00	0E +00	0E +00	0E +00	0E +00	0E +00	0E +00	0E +00
BCCpa	kg C	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0E +00	0E +00	0E +00	0E +00	0E +00	0E +00	0E +00	0E +00	0E +00	0E +00	0E +00	0E +00	0E +00	0E +00

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

CALCULATION RULES

Energy and resource usage of the production facilities have been mass allocated based on data from 2023. A full calendar year of production data was used.

The resulting averages were calculated by aggregating the total energy and resource usage over the year and dividing by the number of production units or time periods. Capital goods, such as factory infrastructure, were excluded from this analysis to focus on operational energy and resource usage.

SCENARIOS AND ADDITIONAL TECHNICAL INFORMATION

The components of Multitherm bandage are brought into the production facility in Kaatsheuvel (A1-A3). Then they are packed and shipped to the customer (A4). Installation loss percentages (A5) are according to the NMD Assessment Method. After their useful life they are shipped (C2) to waste processing to fully go into landfill (C2-C4). The transport distance to waste treatment is also calculated according to the NMD Assessment Method.

DECLARATION OF SVHC

Analysis show no SVHC present in the product.

REFERENCES

CE Delft. (2010). Handboek Schaduwrijzen. Opgehaald van <https://ce.nl/publicaties/handboekschaduwrijzen-waardering-en-weging-van-emissies-en-milieueffecten/>

ISO. (2006). 'ISO 14025: Environmental labels and declarations -- Type III environmental declarations -- Principles and procedures', International Organization for Standardization, ISO14025:2006.

ISO. (2006). 'ISO 14040: Environmental management - Life cycle assessment – Principles and Framework', International Organization for Standardization, ISO14040:2006.

ISO. (2006). 'ISO 14044: Environmental management - Life cycle assessment - Requirements and guidelines', International Organization for Standardization, ISO14044:2006.

NEN. (2013). 'NEN-EN 15804: Duurzaamheid van bouwwerken - Milieuverklaringen van producten - Basisregels voor de productgroep bouwproducten', NEN-EN 15804:2012+A1:2013.

NMD. (2022). Bepalingsmethode 'Milieuprestatie Bouwwerken' versie 1.1 inclusief de bijbehorende wijzigingsbladen.

NMD. (2022, March). Environmental Performance Assessment Method for Construction Works. Opgehaald van https://milieudatabase.nl/wpcontent/uploads/2022/05/Bepalingsmethode_Milieuprestatie_Bouwwerken_maart_2022_Engels.pdf

TNO. (sd). Toxiciteit heeft z'n prijs : schaduwrijzen voor (eco-)toxiciteit en uitputting van abiotische grondstoffen binnen DuboCalc. Opgehaald van https://puc.overheid.nl/rijkswaterstaat/doc/PUC_119145_31/.

REMARKS

None.