



**Environmental  
Product  
Declaration**

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



This declaration is for:  
**Multimastic C**

Provided by:  
**Mulcol International**



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

MRPI® registration  
**1.1.00585.2024**  
date of first issue  
**12-7-2024**  
date of this issue  
**12-7-2024**  
expiry date  
**12-7-2029**



**COMPANY INFORMATION**



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**MRPI® REGISTRATION**

1.1.00585.2024

**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**

Multimastic C

**DECLARED UNIT/FUNCTIONAL UNIT**

kg

**DESCRIPTION OF PRODUCT**

Multimastic C is a waterborne firestop coating based on a sustainable polymer system.

**VISUAL PRODUCT**



**MORE INFORMATION**

<https://www.mulcol.com/multimastic-c?route=multimastic-c>

**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

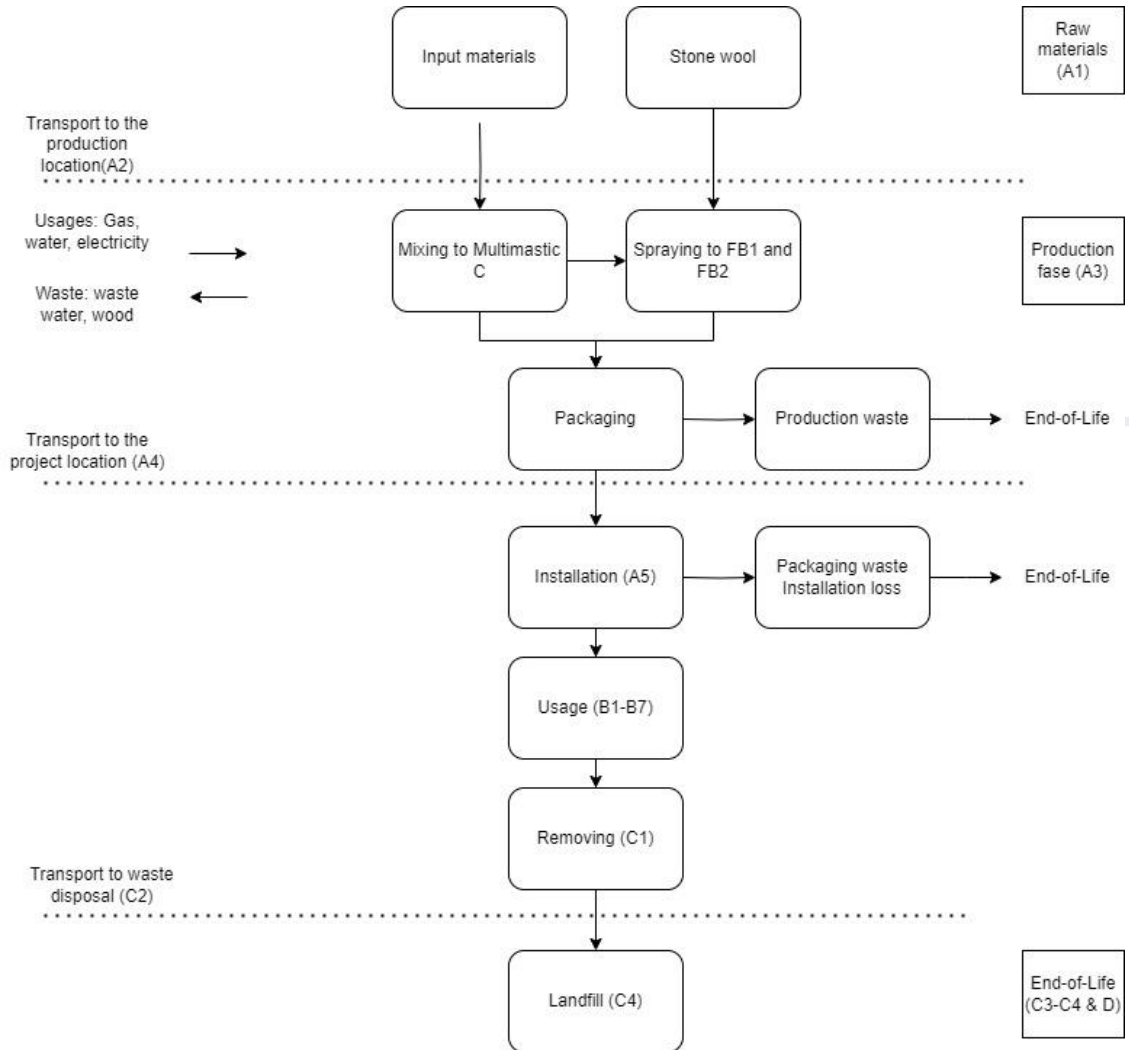
Multimastic C is a waterborne firestop coating based on a sustainable polymer system manufactured by Mulcol. Among other things, this coating is used for the fire-resistant treatment of rock wool Multimastic FB1 / FB2 fire stopping boards and around cable trays and pipe and cable penetrations. This provides a fire-resistant and smoke-proof seal to adjacent rooms. Multimastic C is produced per kilo, the reference service life of Multimastic C is 25 years.

| Component (> 1%) | (%)    |
|------------------|--------|
| Emulsion         | 29,80% |
| Water            | 24,30% |
| Filler           | 27,70% |
| Flame retardant  | 12,60% |
| Flame retardant  | 10,07% |

### 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<br>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.       | 2,38 E-05 | 3,70 E-07 | 3,82 E-06 | 2,80 E-05 | 2,33 E-07 | 4,08 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 | 1,29 E-07 | 0,00 E+00 | 1,49 E-07 | 0,00 E+00 |
| ADPF | MJ              | 3,60 E+01 | 3,35 E-01 | 5,56 E+00 | 4,19 E+01 | 2,10 E-01 | 5,15 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 | 7,75 E-02 | 0,00 E+00 | 3,56 E-01 | 0,00 E+00 |
| GWP  | kg CO2 eq.      | 1,68 E+00 | 2,16 E-02 | 3,32 E-01 | 2,04 E+00 | 1,36 E-02 | 4,26 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 | 5,07 E-03 | 0,00 E+00 | 6,30 E-01 | 0,00 E+00 |
| ODP  | Kg CFC11 eq.    | 9,62 E-08 | 4,09 E-09 | 2,33 E-08 | 1,24 E-07 | 2,57 E-09 | 1,32 E-08 | 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 | 8,99 E-10 | 0,00 E+00 | 2,96 E-09 | 0,00 E+00 |
| POCP | kg ethene eq.   | 1,13 E-03 | 1,32 E-05 | 1,27 E-04 | 1,27 E-03 | 8,26 E-06 | 1,96 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 | 3,06 E-06 | 0,00 E+00 | 1,43 E-04 | 0,00 E+00 |
| AP   | kg SO2 eq.      | 9,44 E-03 | 5,80 E-05 | 1,02 E-03 | 1,05 E-02 | 3,53 E-05 | 1,50 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 | 2,23 E-05 | 0,00 E+00 | 1,43 E-04 | 0,00 E+00 |
| EP   | kg (PO4) 3- eq. | 8,27 E-04 | 9,73 E-06 | 1,45 E-04 | 9,81 E-04 | 5,81 E-06 | 2,25 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 | 4,38 E-06 | 0,00 E+00 | 5,96 E-04 | 0,00 E+00 |

Toxicity indicators for Dutch market

|       |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |
|-------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| HTP   | kg DCB-Eq | 7,36 E-01 | 4,64 E-03 | 1,27 E-01 | 8,68 E-01 | 2,92 E-03 | 1,28 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 | 2,13 E-03 | 0,00 E+00 | 2,63 E-02 | 0,00 E+00 |
| FAETP | kg DCB-Eq | 6,67 E-02 | 1,95 E-04 | 5,66 E-03 | 7,26 E-02 | 1,23 E-04 | 1,18 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 | 6,23 E-05 | 0,00 E+00 | 2,41 E-03 | 0,00 E+00 |
| MAETP | kg DCB-Eq | 8,19 E+01 | 5,28 E-01 | 9,96 E+00 | 9,24 E+01 | 3,32 E-01 | 1,56 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 | 2,24 E-01 | 0,00 E+00 | 5,99 E+00 | 0,00 E+00 |
| TETP  | kg DCB-Eq | 2,14 E-03 | 2,62 E-05 | 2,88 E-03 | 5,04 E-03 | 1,65 E-05 | 7,48 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 | 7,54 E-06 | 0,00 E+00 | 8,33 E-05 | 0,00 E+00 |
| ECI   | euro      | 2,11 E-01 | 1,93 E-03 | 3,55 E-02 | 2,48 E-01 | 1,20 E-03 | 4,36 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 | 6,11 E-04 | 0,00 E+00 | 4,08 E-02 | 0,00 E+00 |
| ADPF  | kg Sb eq. | 1,73 E-02 | 1,61 E-04 | 2,67 E-03 | 2,02 E-02 | 1,01 E-04 | 2,48 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 | 3,73 E-05 | 0,00 E+00 | 1,71 E-04 | 0,00 E+00 |

- 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.              | 1,74 E+00 | 2,18 E-02 | 3,59 E-01 | 2,12 E+00 | 1,37 E-02 | 4,84 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 | 5,11 E-03 | 0,00 E+00 | 9,57 E-01 | 0,00 E+00 |
| GWP-fossil            | kg CO2 eq.              | 1,74 E+00 | 2,17 E-02 | 3,03 E-01 | 2,06 E+00 | 1,37 E-02 | 3,49 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 | 5,11 E-03 | 0,00 E+00 | 6,01 E-02 | 0,00 E+00 |
| GWP-biogenic          | kg CO2 eq.              | 2,64 E-04 | 1,05 E-05 | 5,59 E-02 | 5,62 E-02 | 6,59 E-06 | 1,35 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 | 2,36 E-06 | 0,00 E+00 | 8,97 E-01 | 0,00 E+00 |
| GWP-luluc             | kg CO2 eq.              | 9,28 E-04 | 5,42 E-06 | 1,11 E-04 | 1,04 E-03 | 3,41 E-06 | 1,50 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 | 1,87 E-06 | 0,00 E+00 | 1,80 E-05 | 0,00 E+00 |
| ODP                   | kg CFC11 eq.            | 1,07 E-07 | 5,13 E-09 | 2,52 E-08 | 1,37 E-07 | 3,23 E-09 | 1,46 E-08 | 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 | 1,13 E-09 | 0,00 E+00 | 3,61 E-09 | 0,00 E+00 |
| AP                    | mol H+ eq.              | 1,10 E-02 | 7,26 E-05 | 1,22 E-03 | 1,23 E-02 | 4,39 E-05 | 1,76 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 | 2,96 E-05 | 0,00 E+00 | 1,80 E-04 | 0,00 E+00 |
| EP-freshwater         | kg PO4 eq.              | 4,73 E-05 | 1,51 E-07 | 8,93 E-06 | 5,64 E-05 | 9,52 E-08 | 8,76 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 | 5,15 E-08 | 0,00 E+00 | 5,39 E-06 | 0,00 E+00 |
| EP-marine             | kg N eq.                | 1,34 E-03 | 1,75 E-05 | 2,61 E-04 | 1,62 E-03 | 1,01 E-05 | 4,07 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 | 1,04 E-05 | 0,00 E+00 | 1,27 E-03 | 0,00 E+00 |
| EP-terrestrial        | mol N eq.               | 1,44 E-02 | 1,97 E-04 | 2,05 E-03 | 1,67 E-02 | 1,14 E-04 | 2,42 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 | 1,15 E-04 | 0,00 E+00 | 4,89 E-03 | 0,00 E+00 |
| POCP                  | kg NMVOC eq.            | 5,27 E-03 | 7,15 E-05 | 6,83 E-04 | 6,03 E-03 | 4,25 E-05 | 8,93 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 | 3,29 E-05 | 0,00 E+00 | 3,51 E-04 | 0,00 E+00 |
| ADP-minerals & metals | kg Sb eq.               | 2,38 E-05 | 3,70 E-07 | 3,81 E-06 | 2,80 E-05 | 2,33 E-07 | 4,08 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 | 1,29 E-07 | 0,00 E+00 | 1,49 E-07 | 0,00 E+00 |
| ADP-fossil            | MJ, net calorific value | 3,48 E+01 | 3,38 E-01 | 5,19 E+00 | 4,03 E+01 | 2,12 E-01 | 5,02 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 | 7,71 E-02 | 0,00 E+00 | 3,40 E-01 | 0,00 E+00 |
| WDP                   | m3 world eq. Deprived   | 9,53 E-01 | 1,40 E-03 | 9,15 E-02 | 1,05 E+00 | 9,02 E-04 | 1,46 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 | 2,76 E-04 | 0,00 E+00 | 1,18 E-02 | 0,00 E+00 |

- 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 | 7,11 E-08 | 1,52 E-09 | 7,68 E-09 | 8,03 E-08 | 9,48 E-10 | 1,19 E-08 | 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 | 4,59 E-10 | 0,00 E+00 | 2,10 E-09 | 0,00 E+00 |
| IRP     | kBq U235 eq.      | 4,89 E-02 | 1,45 E-03 | 8,70 E-03 | 5,91 E-02 | 9,12 E-04 | 8,59 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 | 3,23 E-04 | 0,00 E+00 | 1,36 E-03 | 0,00 E+00 |
| ETP -fw | CTUe              | 3,07 E+01 | 2,46 E-01 | 5,34 E+00 | 3,63 E+01 | 1,55 E-01 | 5,89 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 | 6,87 E-02 | 0,00 E+00 | 5,13 E+00 | 0,00 E+00 |
| HTP -c  | CTUh              | 1,66 E-09 | 6,24 E-12 | 3,46 E-10 | 2,01 E-09 | 3,92 E-12 | 2,92 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 | 2,23 E-12 | 0,00 E+00 | 3,19 E-11 | 0,00 E+00 |
| HTP -nc | CTUh              | 3,22 E-08 | 2,00 E-10 | 8,13 E-09 | 4,05 E-08 | 1,25 E-10 | 6,12 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 | 7,52 E-11 | 0,00 E+00 | 1,55 E-09 | 0,00 E+00 |
| SQP     | ----              | 5,50 E+00 | 3,86 E-01 | 6,42 E-01 | 6,53 E+00 | 2,43 E-01 | 1,06 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 | 6,68 E-02 | 0,00 E+00 | 6,10 E-01 | 0,00 E+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 / A2)**

|      | Unit | A1           | A2           | A3           | A1-A3        | A4           | A5           | B1           | B2           | B3           | B4           | B5           | B6           | B7           | C1           | C2           | C3           | C4           | D            |
|------|------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| HWD  | kg   | 1,68<br>E-05 | 8,35<br>E-07 | 7,68<br>E-06 | 2,53<br>E-05 | 5,25<br>E-07 | 3,00<br>E-06 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 1,95<br>E-07 | 0,00<br>E+00 | 1,13<br>E-06 | 0,00<br>E+00 |
| NHWD | kg   | 3,67<br>E-01 | 2,94<br>E-02 | 9,81<br>E-02 | 4,95<br>E-01 | 1,85<br>E-02 | 2,17<br>E-01 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 4,89<br>E-03 | 0,00<br>E+00 | 1,00<br>E+00 | 0,00<br>E+00 |
| RWD  | kg   | 4,98<br>E-05 | 2,29<br>E-06 | 8,37<br>E-06 | 6,04<br>E-05 | 1,44<br>E-06 | 8,85<br>E-06 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 5,06<br>E-07 | 0,00<br>E+00 | 1,76<br>E-06 | 0,00<br>E+00 |
| CRU  | kg   | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 |
| MFR  | kg   | 0,00<br>E+00 | 0,00<br>E+00 | 1,82<br>E-04 | 1,82<br>E-04 | 0,00<br>E+00 | 2,73<br>E-05 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 |
| MER  | kg   | 0,00<br>E+00 | 0,00<br>E+00 | 9,79<br>E-06 | 9,79<br>E-06 | 0,00<br>E+00 | 1,47<br>E-06 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 |
| EEE  | MJ   | 0,00<br>E+00 | 0,00<br>E+00 | 6,63<br>E-04 | 6,63<br>E-04 | 0,00<br>E+00 | 9,95<br>E-05 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 |
| ETE  | MJ   | 0,00<br>E+00 | 0,00<br>E+00 | 1,14<br>E-03 | 1,14<br>E-03 | 0,00<br>E+00 | 1,71<br>E-04 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>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<br>E+00 | 0,00<br>E+00 | 8,23<br>E-03 | 8,23<br>E-03 | 0E<br>+00 | 1E-<br>03 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 |
| PERM  | MJ   | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 |
| PERT  | MJ   | 1,36<br>E+00 | 3,46<br>E-03 | 1,45<br>E-01 | 1,51<br>E+00 | 2E-<br>03 | 2E-<br>01 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 1E-<br>03 | 0E<br>+00 | 1E-<br>02 | 0E<br>+00 |
| PENRE | MJ   | 0,00<br>E+00 | 0,00<br>E+00 | 2,80<br>E+00 | 2,80<br>E+00 | 0E<br>+00 | 4E-<br>01 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 |
| PENRM | MJ   | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 |
| PENRT | MJ   | 3,73<br>E+01 | 3,59<br>E-01 | 5,62<br>E+00 | 4,33<br>E+01 | 2E-<br>01 | 5E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 8E-<br>02 | 0E<br>+00 | 4E-<br>01 | 0E<br>+00 |
| SM    | kg   | 0,00<br>E+00 | 0,00<br>E+00 | 5,55<br>E-05 | 5,55<br>E-05 | 0E<br>+00 | 8E-<br>06 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 |
| RSF   | MJ   | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 |
| NRSF  | MJ   | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 |
| FW    | m3   | 2,46<br>E-02 | 4,24<br>E-05 | 2,62<br>E-03 | 2,72<br>E-02 | 3E-<br>05 | 4E-<br>03 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 9E-<br>06 | 0E<br>+00 | 3E-<br>04 | 0E<br>+00 |

- 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<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 |
| BCCpa | kg C | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0,00<br>E+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 | 0E<br>+00 |

- BBCpr = 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**

Multimastic C is mixed in the Kaatsheuvel production facility. 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.

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#### **REMARKS**

None.