Multicollar *Slim*

Environmental Product Declaration

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

Program operator	Stichting MRPI®
Publisher	Stichting MRPI® www.mrpi.nl
MRPI® registration	1.1.00583.2024
Date of first issue	12-7-2024
Date of this issue	12-7-2024
Expiry date	12-7-2029

MULCOL
FIRE PROTECTION

Mulcol International is a modern developer of innovative passive fire stopping products. Our fundamental objective is to develop and test pragmatic, effective and user-friendly products and solutions that comply with the applicable European standards.

About Mulcol

Pragmatic, effective and user-friendly solutions
Mulcol International continuously researches, develops and tests practical solutions and products in order to offer our customers the best passive fire stopping products. Our aim is to develop innovative fire stopping products and solutions that are relevant and easy to use. Instead of testing theoretical solutions, we believe that we should gauge whether our tested products can be used in practice and reflect real situations.

Care for man and the environment
We feel responsible for the environment and the safety of today's and future generations. We protect life and as such we are always looking for ways to create environmentally-friendly and effective solutions that are fully aimed at saving lives.

Excellent (in) quality
Mulcol International has only one goal and that is to offer products of an excellent quality, designed for our safety. We want to be market leaders in the best performing passive fire protection products.

In addition, quality and safety are also reflected in our working methods in product development, the use of our products and the service we provide to our customers. Our quality management system underlines this commitment to comply with the latest quality standards. We continuously improve and optimise our product development processes, internal processes and customer service. We are focused on enhancing and expanding the performances and characteristics of the existing range of passive fire protection products and systems.

It's in the genes of our people
Mulcol International is a committed organisation of people who have the knowledge, skills, commitment and dedication to develop new and sophisticated passive fire protection products. Our employees are our biggest asset and we're proud of them. All our employees are points of reference within our field of expertise. From the choice of material to development and supply, our people aim for the highest possible level in the field of passive fire protection.

Company information

Mulcol International

Park Veldzigt 2

4336 DX MIDDELBURG

+31 (0) 118 72 61 40

info@mulcol.com

https://www.mulcol.com

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Scope of declaration

The MRPI-EPD certificate, which forms the basis of this document, 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.

Visual product

More information

https://www.mulcol.com/multicollar-slim

Program operator

Stichting MRPI®

Kingsfordweg 151

1043 GR Amsterdam

www.mrpi.nl
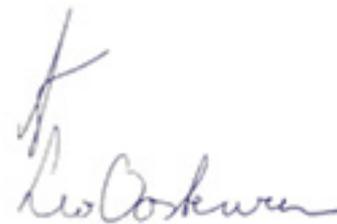
Ing. L. L. Oosterveen MSc. MBA

Managing Director MRPI

Product

Multicollar *Slim*

Declared unit/functional unit

1 piece

Description of product

The Multicollar *Slim* is a fire collar

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

Multicollar *Slim* is a 30 mm-high universal fire collar that consists of a stainless steel band made of 174 links and a high-quality inlay on a graphite basis. In order to achieve the desired pipe diameter, the links can easily be separated. In the event of fire, the Multicollar *Slim* starts foaming and creates a fire-resistant seal to adjacent rooms. In combination with the Multimastic SP sealant, it is also possible to achieve a smoke-proof finish. This fire collar has been extensively tested in Europe in accordance with EN 1366-3. The Multicollar *Slim* fire collar is a single product for all applications. Thanks to the Multiclips and Multiscrews included in the box, one person can easily install it. The reference service life of Multicollar *Slim* is 30 years.

Component (> 1%)	(%)
Steel strap	17,00%
Fire resistant inlay	56,00%
Clip set	10,00%
Screws	8,00%
PP card	7,00%
Glue	2,00%

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

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Purchasing products

                                          Production
                                          fase (A1-A3)

Transport to Mulcol


Packaging          ---   Production waste   ---   End-of-life

Transport to the
project location (A4)


Installation (A5)  ---   Production waste   ---   End-of-life
                         installation loss


Usage (B1-B7)


Removing (C1)

Transport to waste
disposal (C2)


                                          End-of-life
                                          (C3-C4 & D)
Landfill (C4)
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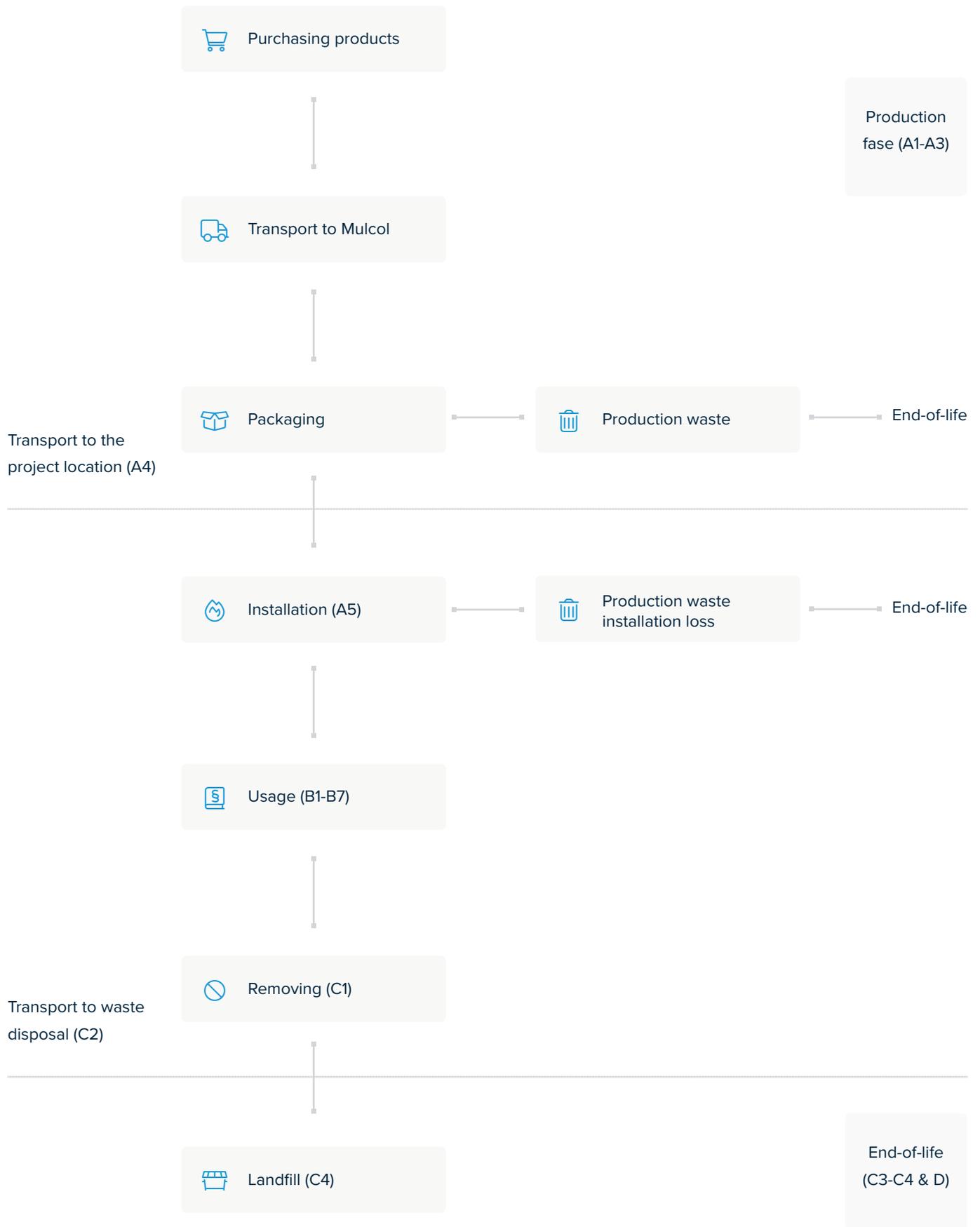
Representativeness

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.	3,80 E-04	3,54 E-06	0,00 E+00	3,83 E-04	1,14 E-06	1,16 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	8,24 E-07	9,56 E-07	1,10 E-06	-4,16 E-07
ADPF	MJ	2,41 E+02	3,19 E+00	0,00 E+00	2,44 E+02	6,82 E-01	7,13 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	4,93 E-01	2,33 E-01	1,07 E+00	-7,38 E+00
GWP	kg CO_2 eq.	1,28 E+01	2,06 E-01	0,00 E+00	1,30 E+01	4,46 E-02	3,75 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	3,23 E-02	1,70 E-02	3,05 E+00	-5,75 E-01
ODP	Kg CFC11 eq.	1,48 E-06	3,90 E-08	0,00 E+00	1,52 E-06	7,91 E-09	4,53 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	5,72 E-09	2,13 E-09	2,83 E-08	-2,00 E-08
POCP	Kg ethene eq.	1,49 E-02	1,25 E-04	0,00 E+00	1,50 E-02	2,69 E-05	4,15 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	1,95 E-05	1,50 E-05	7,15 E-05	-1,25 E-03
AP	kg SO_2 eq.	7,91 E-02	5,36 E-04	0,00 E+00	7,96 E-02	1,96 E-04	2,34 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	1,42 E-04	1,67 E-04	1,79 E-03	-1,94 E-03
EP	kg (PO_4) 3- eq.	1,21 E-02	8,82 E-05	0,00 E+00	1,22 E-02	3,85 E-05	3,61 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	2,79 E-05	2,13 E-05	6,08 E-04	-2,31 E-04

Toxicity indicators for Dutch market

	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
HTP	kg DCB-Eq	6,52 E+01	4,43 E-02	0,00 E+00	6,52 E+01	1,88 E-02	1,95 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	1,36 E-02	2,06 E-02	2,03 E-01	-3,59 E-01
FAETP	kg DCB-Eq	4,41 E-01	1,86 E-03	0,00 E+00	4,43 E-01	5,48 E-04	1,35 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	3,97 E-04	3,84 E-04	6,39 E-03	4,46 E-03
MAETP	kg DCB-Eq	6,95 E+02	5,04 E+00	0,00 E+00	7,00 E+02	1,97 E+00	2,12 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	1,43 E+00	1,67 E+00	2,77 E+01	3,72 E+00
TETP	kg DCB-Eq	9,84 E-02	2,50 E-04	0,00 E+00	9,87 E-02	6,64 E-05	3,87 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	4,80 E-05	6,43 E-05	1,75 E-04	3,00 E-02
ECI	euro	7,07 E+00	1,83 E-02	0,00 E+00	7,09 E+00	5,37 E-03	2,11 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	3,89 E-03	3,80 E-03	1,87 E-01	-7,17 E-02
ADPF	kg Sb eq.	1,16 E-01	1,54 E-03	0,00 E+00	1,17 E-01	3,28 E-04	3,43 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	2,37 E-04	1,12 E-04	5,14 E-04	-3,55 E-03

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.]

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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.	1,34 E+01	2,08 E-01	0,00 E+00	1,36 E+01	4,50 E-02	3,92 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	3,26 E-02	1,62 E-02	3,06 E+00	-6,16 E-01
GWP - fossil	kg CO2 eq.	1,33 E+01	2,08 E-01	0,00 E+00	1,35 E+01	4,50 E-02	3,88 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	3,25 E-02	1,72 E-02	3,06 E+00	-6,16 E-01
GWP - biogenic	kg CO2 eq.	1,24 E-01	1,00 E-04	0,00 E+00	1,24 E-01	2,08 E-05	3,70 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	1,50 E-05	-9,87 E-04	2,69 E-04	0,00 E+00
GWP - luluc)	kg CO2 eq.	8,47 E-03	5,17 E-05	0,00 E+00	8,52 E-03	1,65 E-05	2,70 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	1,19 E-05	1,93 E-05	6,63 E-05	4,55 E-04
ODP	kg CFC11 eq.	1,49 E-06	4,90 E-08	0,00 E+00	1,54 E-06	9,93 E-09	4,63 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	7,18 E-09	2,47 E-09	2,87 E-08	-1,50 E-08
AP	mol H+ eq.	9,51 E-02	6,67 E-04	0,00 E+00	9,57 E-02	2,61 E-04	2,82 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	1,89 E-04	2,09 E-04	2,63 E-03	-2,38 E-03
EP - freshwater	kg PO4 eq.	8,17 E-04	1,45 E-06	0,00 E+00	8,19 E-04	4,54 E-07	2,40 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-07	1,17 E-06	2,63 E-05	-2,18 E-05
EP - marine	kg N eq.	1,81 E-02	1,53 E-04	0,00 E+00	1,82 E-02	9,19 E-05	5,39 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	6,65 E-05	4,60 E-05	1,38 E-03	-4,41 E-04
EP - terrestrial	mol N eq.	1,60 E-01	1,72 E-03	0,00 E+00	1,61 E-01	1,01 E-03	4,74 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	7,33 E-04	5,34 E-04	1,36 E-02	-5,15 E-03
POCP	kg NMVOC eq.	5,85 E-02	6,46 E-04	0,00 E+00	5,92 E-02	2,89 E-04	1,69 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	2,09 E-04	1,46 E-04	3,10 E-03	-3,50 E-03
ADP- minerals & metals	kg Sb eq.	3,80 E-04	3,54 E-06	0,00 E+00	3,83 E-04	1,14 E-06	1,16 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	8,24 E-07	9,56 E-07	1,10 E-06	-4,16 E-07
ADP-fossil	MJ, net calorific value	2,28 E+02	3,23 E+00	0,00 E+00	2,32 E+02	6,78 E-01	6,86 E+00	0,00 E+00	0,00 E+00	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-01	2,39 E-01	9,63 E-01	-4,30 E+00
WDP	m3 world eq. Deprived	7,63 E+00	1,37 E-02	0,00 E+00	7,64 E+00	2,43 E-03	2,26 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	1,76 E-03	2,40 E-03	5,31 E-02	-1,17 E-01

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	9,29 E-07	1,44 E-08	0,00 E+00	9,43 E-07	4,04 E-09	2,75 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	2,92 E-09	2,62 E-09	1,03 E-08	-3,56 E-08
IRP	kBq U235 eq.	4,74 E-01	1,38 E-02	0,00 E+00	4,88 E-01	2,84 E-03	1,51 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	2,06 E-03	1,19 E-03	3,01 E-03	1,05 E-02
ETP-fw	CTUe	9,13 E+02	2,35 E+00	0,00 E+00	9,15 E+02	6,05 E+01	2,69 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	4,38 E-01	1,03 E+00	1,07 E+01	-2,07 E+01
HTP-c	CTUh	1,48 E-07	5,95 E-11	0,00 E+00	1,48 E-07	1,96 E-11	4,44 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	1,42 E-11	2,50 E-11	6,08 E-10	-7,88 E-11
HTP-nc	CTUh	1,22 E-06	1,90 E-09	0,00 E+00	1,22 E-06	6,61 E-10	4,02 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	4,79 E-10	1,19 E-09	6,52 E-09	1,19 E-07
SQP	----	4,77 E+01	3,69 E+00	0,00 E+00	5,14 E+01	5,88 E-01	1,55 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	0,00 E+00	4,26 E-01	4,80 E-01	2,51 E-01	-9,51 E-01

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	1,22 E-02	7,97 E-06	0,00 E+00	1,22 E-02	1,72 E-06	3,64 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	1,24 E-06	7,20 E-07	2,74 E-06	-7,39 E-05
NHWD	kg	4,99 E+00	2,80 E-01	0,00 E+00	5,27 E+00	4,30 E-02	1,59 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	3,11 E-02	6,97 E-03	6,08 E-02	-6,03 E-02
RWD	kg	4,47 E-04	2,19 E-05	0,00 E+00	4,69 E-04	4,45 E-06	1,44 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	3,22 E-06	1,41 E-06	2,86 E-06	3,65 E-06
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

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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	0,00E+00	0,00E+00	0,00E+00	0,00E+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
PERM	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+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
PERT	MJ	2,06E+01	3,31E-02	0,00E+00	2,07E+01	8E-03	6E-01	0E+00	0E+00	0E+00	0E+00	0E+00	0E+00	0E+00	0E+00	6E-03	4E-02	7E-02	1E-01
PENRE	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+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
PENRM	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+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
PENRT	MJ	2,44E+02	3,43E+00	0,00E+00	2,48E+02	7E-01	7E+00	0E+00	0E+00	0E+00	0E+00	0E+00	0E+00	0E+00	0E+00	5E-01	3E-01	1E+00	-4E+00
SM	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+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
RSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+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
NRSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+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
FW	m3	2,04E-01	4,12E-04	0,00E+00	2,04E-01	8E-05	6E-03	0E+00	0E+00	0E+00	0E+00	0E+00	0E+00	0E+00	0E+00	5E-01	3E-01	1E+00	-4E+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-renew able 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	0,00E+00	0,00E+00	0,00E+00	0,00E+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	0,00E+00	0,00E+00	0,00E+00	0,00E+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 it 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

Parts of Multicollar C are brought to the Kaatsheuvel production facility (A1-A3). Then they are packed and shipped to the customer (A4). Installation loss percentages (A5) are according to the NMD Asessment Method. After their usefull life they are shipped (C2) to waste processing to go into landfill (5%), incineration (5%) and recycling (90%) (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.

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