ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

Megaflo Green (socked)
Geofabrics Australasia Pty Ltd

EPD HUB, HUB-3551
Published on 02.07.2025, last updated on 02.07.2025, valid until 01.07.2030

Life Cycle Assessment study has been performed in accordance with the requirements of EN 15804, EPD Hub PCR version 1.1 (5 Dec 2023) and JRC characterization factors EF 3.1.

Created with One Click LCA

GENERAL INFORMATION

MANUFACTURER

Manufacturer	Geofabrics Australasia Pty Ltd
Address	83-93 Canterbury Road, Braeside Victoria , Australia 3195
Contact details	Geofabrics Australasia
Website	https://www.geofabrics.co/

EPD STANDARDS, SCOPE AND VERIFICATION

Program operator	EPD Hub, hub@epdhub.com
Reference standard	EN 15804:2012+A2:2019/AC:2021 and ISO 14025
PCR	EPD Hub Core PCR version 1.1, 5 Dec 2023
Sector	Construction product
Category of EPD	Third party verified EPD
Parent EPD number	-
Scope of the EPD	Cradle to gate with options, A5, and modules C1-C4, D
EPD author	Ross Mahon C6 ESG
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal verification ☑ External verification
EPD verifier	Sarah Curpen, an authorized verifier acting for EPD Hub Limited.

The manufacturer has the sole ownership, liability, and responsibility for the EPD. EPDs within the same product category but from different programs may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804 and if they are not compared in a building context.

PRODUCT

Product name	Megaflo Green (socked)
Additional labels	-
Product reference	MEG170G, MEG200G, MEG300G, MEG450G, MEG900G, MEG170G ULTRA, MEG300G ULTRA, MEG450G ULTRA
Place(s) of raw material origin	Australia, Indonesia, Taiwan
Place of production	79 Boronia St, North Albury, NSW, Australia 2640
Place(s) of installation and use	-
Period for data	01/2024 - 12/2024
Averaging in EPD	Multiple products
Variation in GWP-fossil for A1-A3 (%)	GWP fossil was applied to all products consistently based on grams of weight vs declared unit of 1kg
GTIN (Global Trade Item Number)	-
NOBB (Norwegian Building Product Database)	-
A1-A3 Specific data (%)	49,7

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 kg
Declared unit mass	1 kg
GWP-fossil, A1-A3 ($kgCO_2e$)	1,81E+00
GWP-total, A1-A3 ($kgCO_2e$)	1,87E+00
Secondary material, inputs (%)	99,7
Secondary material, outputs (%)	0
Total energy use, A1-A3 (kWh)	-4,72
Net freshwater use, A1-A3 (m^3)	-0,15

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Geofabrics are in the business of building key infrastructure across Australasia and beyond. We are focused on developing new and innovative products and providing our customers with the world's best solutions to complete civil projects. In 2021 we acquired Plascorp® to become one of the largest private companies in Australian/New Zealand manufacturing. Geofabrics are experts in the area of geosynthetic engineering, having been at the leading edge of developing new and innovative products for over 40 years. Geosynthetic engineering is the use of synthetic materials in civil engineering projects to achieve more cost effective, environmentally sound and safer construction outcomes. We manufacture and distribute geosynthetic products throughout Australia, New Zealand, and other international markets. We operate in various sectors with expertise in infrastructure including roads, rail, mining, coastal, waste, sports and recreation, renewables, water, defense, aviation and ports. Our product innovations include Bidim Green geotextiles and Megaflo Green socked slotted drainpipes, both made utilising recycled plastic material and Sorbseal hybrid geosynthetic clay liners with activated carbon for the containment of environmental contaminants. Plascorp® has been in the industry for over 60 years and is one of Australia's leading privately owned manufacturers of construction and industrial products including PVC pipe, mine ventilation, steel reinforcement, ducting and hose. With local manufacturing plants in Victoria, Western Australia and Queensland, Plascorp and Geofabrics share common business philosophies and history. Plascorp has a strong presence in the commercial, residential and industrial markets which provide opportunities for Geofabrics to grow in these sectors.

PRODUCT DESCRIPTION

Megaflo® Green is an alternative to conventional, round agricultural (agi) drain pipe that collects and removes water rapidly. Its slim 40mm wide profile is faster and more cost-effective to install. BENEFITS Easy to install, Up to 4.9 times faster water drainage compared to conventional 100mm agi pipe. Saves up to 50% installation compared to conventional 100mm agi pipe. Can be installed vertically or horizontally with or without the need to excavate a trench High crush resistance due to its structural rigidity. Made in Australia from HDPE recycled milk bottles. Covered with Bidim® Green geotextile Megaflo Green is ideal for use in landscaping applications such as behind retaining walls, under driveways and paths. It's the most effective system on the market for drainage of lawns and turf and is used extensively in sports grounds and golf courses. RETAINING WALLS• Provides reliable drainage in applications such as retaining and shotcrete walls• Drains ground water and releases hydraulic pressure behind non-structural retaining walls such as concrete and timber sleepers. DRIVEWAYS AND PATHS• Install vertically in trench 100mm wide and 270mm deep minimum • Place closest to direction of water infiltration or centered in trench. LAWNS AND TURF• Trench-less installation using Megaflo Green in horizontal position• Space 5m apart maximum• Top dress with free draining material

Further information can be found at: https://www.geofabrics.co/.

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	0	-
Minerals	0	-
Fossil materials	100	-
Bio-based materials	0	-

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	-
Biogenic carbon content in packaging, kg C	0,0057

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 kg
Mass per declared unit	1 kg
Functional unit	-
Reference service life	-

SUBSTANCES, REACH - VERY HIGH CONCERN

The product does not contain any REACH SVHC substances in amounts greater than 0,1 % (1000 ppm).

PRODUCT LIFE-CYCLE

SYSTEM BOUNDARY

This EPD covers the life-cycle modules listed in the following table.

Product stage			Assembly stage		Use stage							End of life stage				Beyond the system boundaries		
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D		
X	X	X	MND	X	MND	MND	MND	MND	MND	MND	MND	X	X	X	X	X		
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction/ demolition	Transport	Waste processing	Disposal	Reuse	Recovery	Recycling

Modules not declared = MND. Modules not relevant = MNR

MANUFACTURING AND PACKAGING (A1-A3)

The environmental impacts considered for the product stage cover the manufacturing of raw materials used in production as well as packaging materials and other ancillary materials. Also, fuels used by machines, and handling of waste formed in the production processes at the manufacturing facilities are included in this stage. The study also considers the material losses occurring during the manufacturing processes as well as losses during electricity transmission.

A market-based approach is used in modelling the electricity mix utilized in the factory.

Megaflo Green manufacture is performed at the Albury plant, NSW on a single continuous line. The process starts with HDPE & masterbatch blending and extrusion into the final product shape and either covered in geotextile for socked products or left uncovered. All product grades are manufactured on the same processing line, with processing parameters adjusted to suit the required production throughput. This process uses electricity as the only energy source. Consumables used are lubricant (negligible). Waste outputs mainly consist of production scrap (negligible as able to be processed back into product), shrink-wrap packaging off-cuts. The manufacturing process involves the production of raw materials, transport of raw materials from the supplier sites to Geofabrics manufacturing site in Albury, NSW, Australia, and processing of raw materials into respective non-woven geotextile grades of Megaflo Green product. There are two main raw materials which are supplied to Geofabrics:• Primary HDPE granulate • Secondary PE- based masterbatch Raw material inputs, required for production of primary and secondary HDPE are the main inputs to supplier production processes. Granulate output is then bulk transported from supplier sites in Melbourne and Sydney to Geofabrics Albury plant in NSW, Australia. Transport of all raw materials from supplier sites into Geofabrics Albury site in NSW, Australia was included in the study (inbound transport into Albury plant). Data collection included all the transport distances within Australia. Where raw materials were transported from overseas the estimate distances were used based on assuming cargo ship and truck transport.

TRANSPORT AND INSTALLATION (A4-A5)

Transportation impacts occurred from final products delivery to construction site (A4) cover fuel direct exhaust emissions, environmental impacts of fuel production, as well as related infrastructure emissions.

Module A5 Installation is included in the scope of the study only as it relates to the treatment of packaging at the construction site.

Module A4 (Distribution) and Module A5 (Installation) except as detailed in previous paragraph are not included in the scope of this study, therefore is not part of the system boundary and is not included in the model.

PRODUCT USE AND MAINTENANCE (B1-B7)

Modules B1-B7 (Use) is not included in the scope of this study, therefore is not part of the system boundary and is not included in the model.
Air, soil, and water impacts during the use phase have not been studied.

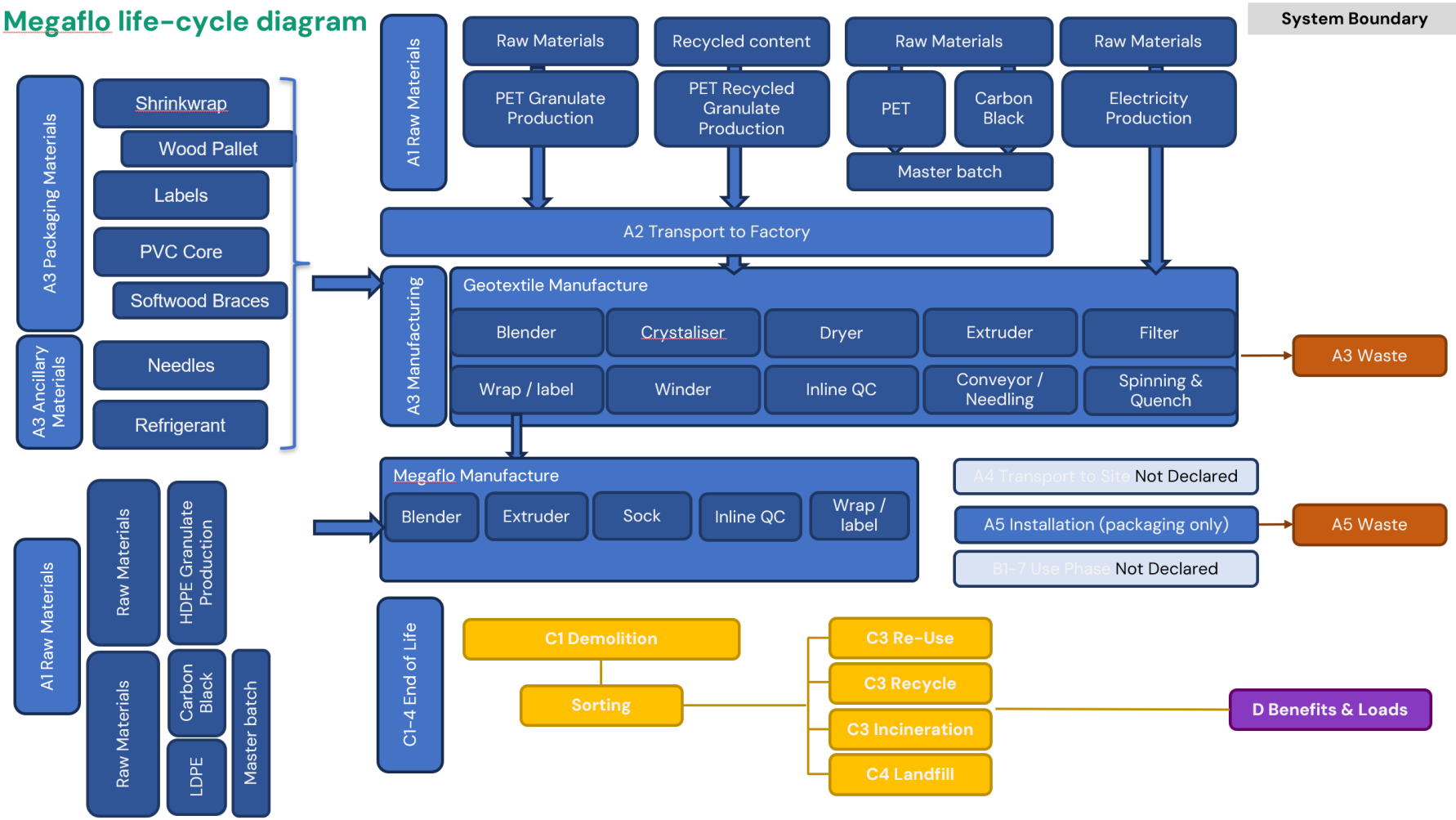
PRODUCT END OF LIFE (C1-C4, D)

The end-of-life processes involve the deconstruction of the infrastructure, where Megaflo is used, the transport of Megaflo to a landfill, and the landfilling of the plastic waste. All waste is modelled as going straight to landfill at end-of-life due to soil contamination. This approach does not provide any credits for module D. Transport (C2) Module includes the transport of used Megaflo product after deconstruction/demolition, by truck, to a landfill, where construction waste typically goes. The estimated transport distance by truck is 50 km. Waste processing (C3) As all waste is modelled as going straight to landfill at end-of-life, there is no processing involved. Therefore, waste processing impacts have been modelled as zero in this study. Disposal (C4) All waste is disposed of in landfill, modelled as plastic waste on landfill. There is no biogenic content in any of the non-woven geotextile grades. Transport to landfill is included. No credits for power or heat production are assigned. Module D starts at the “end of waste” when the non-woven geotextile product is no longer a product in its first life cycle and starts to be a potential input for its second life cycle. For nonwoven geotextile product, as they are 100% landfilled there are no credits for module D.

During the manufacturing process there are steel needles used which are collected and recycled, the benefit of this is included for Module D.

MANUFACTURING PROCESS

Megaflo life-cycle diagram



LIFE-CYCLE ASSESSMENT

CUT-OFF CRITERIA

The study does not exclude any modules or processes which are stated mandatory in the reference standard and the applied PCR. The study does not exclude any hazardous materials or substances. The study includes all major raw material and energy consumption. All inputs and outputs of the unit processes, for which data is available for, are included in the calculation. There is no neglected unit process more than 1% of total mass or energy flows. The module specific total neglected input and output flows also do not exceed 5% of energy usage or mass.

The production of capital equipment, construction activities, and infrastructure, maintenance and operation of capital equipment, personnel-related activities, energy and water use related to company management and sales activities are excluded.

A1-A3 All Process inputs have been included, although there has been some grouping where it is less than 1% i.e. grease has been grouped with mineral oil.

VALIDATION OF DATA

Data collection for production, transport, and packaging was conducted using time and site-specific information, as defined in the general information section on page 1 and 2. Upstream process calculations rely on generic data as defined in the Bibliography section. Manufacturer-provided specific and generic data were used for the product's manufacturing stage. The analysis was performed in One Click LCA EPD Generator, with the 'Cut-Off, EN 15804+A2' allocation method, and characterization factors according to EN 15804:2012+A2:2019/AC:2021 and JRC EF 3.1.

ALLOCATION, ESTIMATES AND ASSUMPTIONS

Allocation is required if some material, energy, and waste data cannot be measured separately for the product under investigation. All allocations are done as per the reference standards and the applied PCR. In this study, allocation has been done in the following ways:

Data type	Allocation
Raw materials	Allocated by mass or volume
Packaging material	Allocated by mass or volume
Ancillary materials	Allocated by mass or volume
Manufacturing energy and waste	Allocated by mass or volume

PRODUCT & MANUFACTURING SITES GROUPING

Type of grouping	Multiple products
Grouping method	Based on average results of product group - by total mass
Variation in GWP-fossil for A1-A3, %	GWP fossil was applied to all products consistently based on grams of weight vs declared unit of 1kg

Megaflo grades are all produced from the same material inputs (HDPE) and geotextile covering (Bidim Green), and on the same production process. The Bidim is wrapped on the outside of the product with the same density of geotextile construction and therefore is a consistent ratio as the size of the Megaflo product increases.

LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator. The LCA and EPD have been prepared according to the reference standards and ISO 14040/14044. The EPD Generator uses Ecoinvent v3.10.1 and One Click LCA databases as sources of environmental data. Allocation used in Ecoinvent 3.10.1 environmental data sources follow the methodology ‘allocation, Cut-off, EN 15804+A2‘.

ENVIRONMENTAL IMPACT DATA

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, EF 3.1

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP – total[1)]	kg CO_2e	8,38E-01	6,13E-02	9,67E-01	1,87E+00	MND	2,36E-03	MND	MND	MND	MND	MND	MND	MND	2,46E-01	9,76E-03	0,00E+00	1,20E-01	-4,99E-04
GWP – fossil	kg CO_2e	7,85E-01	6,13E-02	9,67E-01	1,81E+00	MND	2,36E-03	MND	MND	MND	MND	MND	MND	MND	2,46E-01	9,76E-03	0,00E+00	1,20E-01	-4,98E-04
GWP – biogenic	kg CO_2e	5,13E-02	1,32E-05	-3,86E-04	5,09E-02	MND	-1,11E-06	MND	MND	MND	MND	MND	MND	MND	2,51E-05	2,13E-06	0,00E+00	-6,52E-05	-4,14E-07
GWP – LULUC	kg CO_2e	1,09E-03	2,81E-05	2,01E-04	1,32E-03	MND	2,12E-07	MND	MND	MND	MND	MND	MND	MND	2,52E-05	4,32E-06	0,00E+00	7,30E-06	-4,55E-07
Ozone depletion pot.	kg CFC_{-11}e	1,24E-06	9,05E-10	9,70E-09	1,25E-06	MND	7,75E-12	MND	MND	MND	MND	MND	MND	MND	3,77E-09	1,36E-10	0,00E+00	2,89E-10	-3,48E-11
Acidification potential	mol H^+e	3,80E-03	4,06E-04	3,91E-03	8,11E-03	MND	2,04E-06	MND	MND	MND	MND	MND	MND	MND	2,22E-03	3,25E-05	0,00E+00	7,94E-05	-2,03E-06
EP-freshwater[2)]	kg Pe	2,42E-04	4,41E-06	1,23E-03	1,48E-03	MND	3,53E-08	MND	MND	MND	MND	MND	MND	MND	7,11E-06	7,59E-07	0,00E+00	1,18E-06	-1,92E-08
EP-marine	kg Ne	7,74E-04	1,16E-04	9,32E-04	1,82E-03	MND	5,01E-06	MND	MND	MND	MND	MND	MND	MND	1,03E-03	1,05E-05	0,00E+00	2,64E-04	-3,89E-07
EP-terrestrial	mol Ne	7,51E-03	1,27E-03	7,53E-03	1,63E-02	MND	7,99E-06	MND	MND	MND	MND	MND	MND	MND	1,13E-02	1,15E-04	0,00E+00	3,24E-04	-4,30E-06
POCP ("smog")[3)]	kg NMVOCe	2,89E-03	4,36E-04	2,41E-03	5,74E-03	MND	3,39E-06	MND	MND	MND	MND	MND	MND	MND	3,37E-03	4,53E-05	0,00E+00	1,41E-04	-2,29E-06
ADP-minerals & metals[4)]	kg Sbe	3,39E-05	1,58E-07	1,27E-06	3,53E-05	MND	1,04E-09	MND	MND	MND	MND	MND	MND	MND	8,83E-08	3,20E-08	0,00E+00	2,52E-08	-1,37E-09
ADP-fossil resources	MJ	1,25E+01	8,71E-01	1,20E+01	2,54E+01	MND	7,01E-03	MND	MND	MND	MND	MND	MND	MND	3,22E+00	1,37E-01	0,00E+00	2,48E-01	-7,92E-03
Water use[5)]	m^3e depr.	1,98E-01	4,09E-03	1,11E-01	3,12E-01	MND	3,37E-05	MND	MND	MND	MND	MND	MND	MND	8,05E-03	6,35E-04	0,00E+00	1,22E-03	-6,47E-04

1) GWP = Global Warming Potential; 2) EP = Eutrophication potential. Required characterisation method and data are in kg P-eq. Multiply by 3,07 to get PO4e; 3) POCP = Photochemical ozone formation; 4) ADP = Abiotic depletion potential; 5) EN 15804+A2 disclaimer for Abiotic depletion and Water use and optional indicators except Particulate matter and Ionizing radiation, human health. The results of these environmental impact indicators shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.

ADDITIONAL (OPTIONAL) ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, EF 3.1

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Particulate matter	Incidence	6,32E-08	5,55E-09	1,18E-08	8,06E-08	MND	4,69E-11	MND	MND	MND	MND	MND	MND	MND	6,32E-08	7,74E-10	0,00E+00	1,80E-09	-3,10E-11
Ionizing radiation[6)]	kBq U235e	3,83E-02	7,22E-04	8,13E-03	4,71E-02	MND	6,51E-06	MND	MND	MND	MND	MND	MND	MND	1,43E-03	1,11E-04	0,00E+00	2,47E-04	-1,50E-05
Ecotoxicity (freshwater)	CTUe	3,77E+00	1,17E-01	2,41E+00	6,30E+00	MND	7,13E-03	MND	MND	MND	MND	MND	MND	MND	1,77E-01	2,16E-02	0,00E+00	3,70E-01	-9,68E-03
Human toxicity, cancer	CTUh	3,58E-10	1,05E-11	1,65E-10	5,34E-10	MND	1,37E-13	MND	MND	MND	MND	MND	MND	MND	2,53E-11	1,66E-12	0,00E+00	5,85E-12	-1,67E-12
Human tox. non-cancer	CTUh	8,85E-09	5,26E-10	7,09E-09	1,65E-08	MND	2,26E-11	MND	MND	MND	MND	MND	MND	MND	4,01E-10	8,57E-11	0,00E+00	1,15E-09	-1,09E-11
SQP[7)]	-	2,67E+00	7,77E-01	1,03E+00	4,47E+00	MND	1,20E-02	MND	MND	MND	MND	MND	MND	MND	2,26E-01	8,17E-02	0,00E+00	5,79E-01	-7,44E-04

6) EN 15804+A2 disclaimer for Ionizing radiation, human health. 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; 7) SQP = Land use related impacts/soil quality.

USE OF NATURAL RESOURCES

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Renew. PER as energy[8)]	MJ	9,17E-01	1,14E-02	7,20E-01	1,65E+00	MND	1,05E-04	MND	MND	MND	MND	MND	MND	MND	2,04E-02	1,88E-03	0,00E+00	3,89E-03	-5,10E-04
Renew. PER as material	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Total use of renew. PER	MJ	9,17E-01	1,14E-02	7,20E-01	1,65E+00	MND	1,05E-04	MND	MND	MND	MND	MND	MND	MND	2,04E-02	1,88E-03	0,00E+00	3,89E-03	-5,10E-04
Non-re. PER as energy	MJ	-2,94E+01	8,71E-01	9,86E+00	-1,86E+01	MND	-7,06E-01	MND	MND	MND	MND	MND	MND	MND	3,22E+00	1,37E-01	0,00E+00	-3,89E+01	-9,19E-03
Non-re. PER as material	MJ	4,19E+01	0,00E+00	-6,97E-01	4,12E+01	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	-4,12E+01	0,00E+00
Total use of non-re. PER	MJ	1,25E+01	8,71E-01	9,16E+00	2,26E+01	MND	-7,06E-01	MND	MND	MND	MND	MND	MND	MND	3,22E+00	1,37E-01	0,00E+00	-8,01E+01	-9,19E-03
Secondary materials	kg	9,97E-01	3,76E-04	2,34E-03	1,00E+00	MND	2,76E-06	MND	MND	MND	MND	MND	MND	MND	1,34E-03	6,15E-05	0,00E+00	8,98E-05	-7,52E-04
Renew. secondary fuels	MJ	4,24E-05	4,31E-06	6,02E-04	6,49E-04	MND	4,49E-08	MND	MND	MND	MND	MND	MND	MND	3,50E-06	7,83E-07	0,00E+00	1,68E-06	0,00E+00
Non-ren. secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m^3	4,64E-03	1,21E-04	-1,51E-01	-1,47E-01	MND	-6,70E-05	MND	MND	MND	MND	MND	MND	MND	2,13E-04	1,81E-05	0,00E+00	-3,69E-03	-1,63E-05

8) PER = Primary energy resources.

END OF LIFE – WASTE

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste	kg	5,83E-02	1,44E-03	6,77E-02	1,27E-01	MND	1,23E-05	MND	MND	MND	MND	MND	MND	MND	3,59E-03	2,39E-04	0,00E+00	4,36E-04	-3,54E-07
Non-hazardous waste	kg	2,10E+00	2,61E-02	7,00E+01	7,21E+01	MND	9,05E-02	MND	MND	MND	MND	MND	MND	MND	4,89E-02	4,47E-03	0,00E+00	4,96E+00	-2,62E-05
Radioactive waste	kg	9,68E-06	1,77E-07	1,97E-06	1,18E-05	MND	1,59E-09	MND	MND	MND	MND	MND	MND	MND	3,50E-07	2,71E-08	0,00E+00	6,04E-08	-2,69E-08

END OF LIFE – OUTPUT FLOWS

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Components for re-use	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for recycling	kg	0,00E+00	0,00E+00	7,40E-04	7,40E-04	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-2,14E-08
Materials for energy rec	kg	0,00E+00	0,00E+00	2,74E-04	2,74E-04	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-1,07E-16
Exported energy	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-1,16E-03
Exported energy – Electricity	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-1,16E-03
Exported energy –	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

ENVIRONMENTAL IMPACTS – EN 15804+A1, CML

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Global Warming Pot.	kg CO_2e	8,33E-01	6,10E-02	9,65E-01	1,86E+00	MND	2,26E-03	MND	MND	MND	MND	MND	MND	MND	2,45E-01	9,70E-03	0,00E+00	1,14E-01	-4,98E-04
Ozone depletion Pot.	kg CFC_{-11}e	8,31E-07	7,22E-10	7,91E-09	8,39E-07	MND	6,19E-12	MND	MND	MND	MND	MND	MND	MND	2,99E-09	1,09E-10	0,00E+00	2,31E-10	-4,93E-11
Acidification	kg SO_2e	3,15E-03	3,18E-04	3,25E-03	6,72E-03	MND	1,53E-06	MND	MND	MND	MND	MND	MND	MND	1,56E-03	2,49E-05	0,00E+00	5,90E-05	-1,77E-06
Eutrophication	kg PO_4^3e	3,06E-03	5,36E-05	1,47E-03	4,58E-03	MND	8,13E-07	MND	MND	MND	MND	MND	MND	MND	3,65E-04	6,06E-06	0,00E+00	3,86E-05	-2,30E-07
POCP (“smog”)	kg C_2H_4e	2,45E-04	2,13E-05	1,96E-04	4,62E-04	MND	4,44E-07	MND	MND	MND	MND	MND	MND	MND	1,17E-04	2,23E-06	0,00E+00	2,21E-05	-1,70E-07
ADP-elements	kg Sbe	3,38E-05	1,55E-07	1,24E-06	3,52E-05	MND	1,02E-09	MND	MND	MND	MND	MND	MND	MND	8,58E-08	3,13E-08	0,00E+00	2,44E-08	-1,37E-09
ADP-fossil	MJ	1,19E+01	8,60E-01	1,18E+01	2,46E+01	MND	6,91E-03	MND	MND	MND	MND	MND	MND	MND	3,20E+00	1,35E-01	0,00E+00	2,44E-01	-7,92E-03

ENVIRONMENTAL IMPACTS – GWP-GHG

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG[9)]	kg CO_2e	7,86E-01	6,13E-02	9,67E-01	1,81E+00	MND	2,36E-03	MND	MND	MND	MND	MND	MND	MND	2,46E-01	9,76E-03	0,00E+00	1,20E-01	-4,98E-04

9) This indicator includes all greenhouse gases excluding biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product as defined by IPCC AR 5 (IPCC 2013). In addition, the characterisation factors for the flows - CH4 fossil, CH4 biogenic and Dinitrogen monoxide - were updated in line with the guidance of IES PCR 1.2.5 Annex 1. This indicator is identical to the GWP-total of EN 15804:2012+A2:2019 except that the characterization factor for biogenic CO2 is set to zero.

THIRD-PARTY VERIFICATION STATEMENT

EPD Hub declares that this EPD is verified in accordance with ISO 14025 by an independent, third-party verifier. The project report on the Life Cycle Assessment and the report(s) on features of environmental relevance are filed at EPD Hub. EPD Hub PCR and ECO Platform verification checklist are used.

EPD Hub is not able to identify any unjustified deviations from the PCR and EN 15802+A2 in the Environmental Product Declaration and its project report.

EPD Hub maintains its independence as a third-party body; it was not involved in the execution of the LCA or in the development of the declaration and has no conflicts of interest regarding this verification.

The company-specific data and upstream and downstream data have been examined as regards plausibility and consistency. The publisher is responsible for ensuring the factual integrity and legal compliance of this declaration.

The software used in creation of this LCA and EPD is verified by EPD Hub to conform to the procedural and methodological requirements outlined in ISO 14025:2010, ISO 14040/14044, EN 15804+A2, and EPD Hub Core Product Category Rules and General Program Instructions.

Verified tools

Tool verifier: Magaly Gonzalez Vazquez
Tool verification validity: 27 March 2025 - 26 March 2028

Sarah Curpen, an authorized verifier acting for EPD Hub Limited.

02.07.2025

Annex 1

Product Scaling Table Module A1-A3 GWP Kg CO2 / Lineal metre											
Impact Category		Unit	A1-A3	A1-A3	A1-A3	A1-A3	A1-A3	A1-A3	A1-A3	A1-A3	A1-A3
Product Code			Declared Unit	MEG170G	MEG200G	MEG300G	MEG450G	MEG900	MEG170G Ultra	MEG300G Ultra	MEG450G Ultra
Product Weight		Kg / lineal metre	1	0.634	0.748	1.174	1.791	3.621	0.718	1.384	2.171
EN15804+A2, PEF	GWP-total		1.86	1.179	1.391	2.184	3.331	6.735	1.335	2.574	4.038
	GWP -fossil		1.81	1.148	1.354	2.125	3.242	6.554	1.300	2.505	3.930
	GWP -biogenic		0.05	0.032	0.037	0.059	0.090	0.181	0.036	0.069	0.109
	GWP -luluc		0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000