



Planter Protect

WHERE BEAUTY MEETS DURABILITY

Environmental Product Declaration

In accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021 for:

Planter Protect Standard Product

EPD of multiple products based on a representative product (Standard, and Natural).



EPD

INTERNATIONAL EPD SYSTEM

Programme: The International EPD System,
www.environdec.com

Programme Operator: EPD International AB

EPD Registration Number: EPD-IES-0028174:001

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An EPD may be updated or republished if conditions change.

To find the latest version of the EPD and to confirm its validity, see www.environdec.com



General Information

This EPD provides environmental performance indicators for a Planter Protect Product Range using the Planter Protect Standard Product as the representative product that is manufactured by Planter Protect Limited. This is a cradle-to-gate analysis covering the modules A1-A3 (raw materials supply, upstream transport of raw materials to the manufacturing site and manufacturing information) and C1-C4 (end-of-life stages) in accordance with the requirements of EN 15804. This EPD is based on a life cycle assessment (LCA) study completed with production data obtained from Planter Protect for the 2025 financial year and the facility is located at Unit 14 Alresford Business Centre, Colchester Main Road, Alresford, Essex, CO7 8DJ. This EPD presents details of the LCA completed by Tunley Environmental for Planter Protect Limited.

The EPD owner has sole ownership, liability, and responsibility of the EPD.

EPDs within the same product category but registered in different EPD programmes, or not compliant with EN 15804, may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same version number) or be based on fully-aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterisation factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.

Table 1. Full details on the EPD programme and accountabilities.

Programme Information	
EPD programme	The International EPD System
EPD Programme Operator	EPD International AB, Box 21060, SE-10031 Stockholm, Sweden www.environdec.com support@envirodec.com
Accountabilities for PCR, LCA and independent, third-party verification	
Product Category Rules	CEN Standard EN 15804 serves as the core Product Category Rules (PCR). Product Category Rules (PCR) 2019:14, Version 2.0.1, UN CPC Code 369
PCR Review Conducted by	The Technical Committee of the International EPD System. A full list of members is available on www.environdec.com . The review panel may be contacted via support@environdec.com . Chair of the PCR review: Rob Rouwette.
LCA Conducted by	Tunley Environmental – www.tunley-environmental.com
LCA Software	SimaPro 9.6.0.1
Background Data from	Ecoinvent 3.9.1
Third Party Verification	Independent third-party verification of the declaration and data, according to ISO 14025:2006, via Individual EPD verification without a pre-verified LCA/EPD tool.
Third Party Verifier	Stephen Forson, ViridisPride
Approved by	The International EPD® System
Procedure for data follow-up during EPD validity involves third party verifier:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No



EPD Owner Information

EPD Owner: Planter Protect Limited

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Production Sites: Unit 14 Alresford Business Centre, Colchester Main Road, Alresford, Essex, CO7 8DJ

About Planter Protect:

Planter Protect Ltd is a UK-based manufacturer specialising in premium, custom-made glass reinforced plastic planter inserts and liners. These are referred to as Planter Protect Products. They are designed to enhance the longevity and aesthetic appeal of planters in both residential and commercial settings. Established in March 2024 and headquartered in Great Bentley, Essex, the company has swiftly positioned itself as a trusted partner for architects, urban designers, joinery companies, biophilic designers, and office developers seeking sustainable and durable solutions for their planting needs.

The company's product offerings include precision-engineered glass reinforced plastic inserts and liners (Planter Protect Range Products) that are tailored to fit a wide range of planter shapes and sizes. These inserts are constructed from recycled PET resin, diverting approximately 1,800 plastic bottles from landfills with each drum of resin used. The design ensures that the inserts are 100% waterproof, splinter-free, and capable of withstanding the rigours of both indoor and outdoor environments. Additionally, Planter Protect Ltd provides services such as custom fabrication, refurbishment, and on-site installation, catering to the unique requirements of each project.

Demonstrating a strong commitment to quality and environmental stewardship, Planter Protect Ltd has achieved ISO 9001 and ISO 14001 certifications through the British Assessment Bureau, a UKAS-accredited certification body. ISO 9001 signifies the company's adherence to internationally recognised quality management standards, ensuring consistent product quality and customer satisfaction. ISO 14001 reflects the company's dedication to effective environmental management, encompassing sustainable sourcing, waste reduction, and energy-efficient practices. These certifications underscore Planter Protect Ltd's proactive approach to integrating quality and sustainability into every facet of its operations.

Furthermore, Planter Protect Ltd proudly bears the 'Made in Britain' mark, affirming its commitment to UK manufacturing excellence. This affiliation not only supports local supply chains and job creation but also aligns with the company's sustainability goals by reducing transportation emissions and environmental impact. Through these initiatives, Planter Protect Ltd continues to deliver high-quality, environmentally conscious planter protection solutions that meet the evolving needs of the design and construction industries.



Product Information

Product Name: Planter Protect Standard Product

Product Description: The Planter Protect Products are designed to provide durable, waterproof, and protective solutions for planters in residential, commercial, and urban landscapes. They prevent leakage, protect planter materials from moisture, and extend the lifespan of planter installations.

Technical Picture of Product:



Technical Description of Product

Resin represents 62 wt.% of the composition of the final product. Thus technical information is directly provided for the thixotropic, pre-accelerated, low styrene emission general purpose polyester resin. This is the clear casting physical properties cured using 1,5% MEKP-50 catalyst. Post cured at 50°C for 24 hours. HDT sample post cured at 70°C for 24 hours.

Table 2. Cured resin physical properties for AROPOL™ PTM 208 TA Low Styrene Emission Resin.

Property	Value	Unit	Method
Tensile Strength	60	MPa	ISO 527
Tensile Modulus	3200	MPa	ISO 527
Elongation at Break	2,5	%	ISO 527
Flexural Strength	110	MPa	ISO 178
Flexural Modulus	3100	MPa	ISO 178
Heat Deflection Temperature (HDT)	80	C	ISO 75/2 (A)

Planter Protect Standard Product is made of glass reinforced plastic (GRP). The thickness of all products is 5 mm as standard. The weight of 1 m² of the Planter Protect product is quantified at 7.29 kg giving an area density of 7.29 kg/m². Consequently, a density of the product is quantified at 1,457.02 kg/m³.

The product has the following properties:

Manufacturer Name: Planter Protect Limited

Manufacturer Location: Unit 14 Alresford Business Centre, Colchester Main Road, Alresford, Essex, CO7 8DJ

Service Life: Under normal conditions of use and maintenance, the expected service life of Planter Protect Product is 25 years plus, aligning with the typical lifespan of planter joinery and interior/exterior fit-out elements.



Product Stage (A1 to A3): Raw Materials Supply, Transport and Manufacturing

The following A1 to A3 stages are considered:

- **A1, Raw Material Supply:** Covers the extraction and processing of raw materials for all components in the Planter Protect Product, including recycled PET resin, chopped strand matt, catalyst, gel, pigment, melamine and coating. All materials are quantified per m² of product and a detailed breakdown of all raw materials for the different components used in the production of the Planter Protect Product is analysed.
- **A2, Transport to Manufacturer:** Includes upstream transportation of materials from suppliers to the manufacturing site. Land and sea transport are considered for transport modes for HGVs and container ship, and these are included based on material origin and route specifics. Freight distances are derived from supplier data and logistics assumptions.
- **A3, Manufacturing:** Captures energy consumption (electricity use) at the Planter Protect Ltd.'s production facility in Alresford, Essex. No water usage and heating processes occur during the manufacturing stage or part of any supporting processes. The UK electricity factor from EcoInvent v3.9.1 was employed (1 kWh Electricity, medium voltage {GB}) this gives a GWP-GHG of 0.274 kg CO₂e/kWh.

Assembly Process: All components are assembled into final Planter Protect Product at the Alresford, Essex facility. This includes the raw material preparation, cutting, moulding, assembly/fabrication and quality control. Assembly is predominantly manual and electrically assisted.

Electricity Fuel Grid Mix

The UK electricity factor from EcoInvent v3.9.1 was employed (1 kWh Electricity, medium voltage {GB}) this gives a GWP-GHG of 0.274 kg CO₂e/kWh. The corresponding fuel grid mix to this is provided in Figure 1.

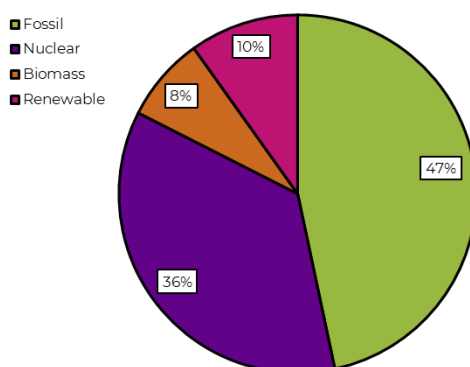


Figure 1. Fuel grid mix for the UK from EcoInvent 3.9.1.



Transportation 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. Installation (A5) emissions are related to consumption-based processes and additional materials required for installation of said products.

Description of Installation Process: Modules A4 and A5 are not considered by this study as this sits outside of Planter Protect Ltd.'s direct control or oversight. Therefore, quantification cannot be achieved without heavy assumptions.

Product Use and Maintenance (B1-B7)

Modules B1-B7 are not considered in this study, as the product use is passive (no operational energy), and no significant maintenance or replacement is expected over the service life. Refurbishment and operational water use are excluded as they are deemed out of scope.

End-of-Life (C1-C4, & D)

This stage includes:

- **C1, Deconstruction:** The Planter Protect Product is designed for simple removal. Deconstruction is assumed to be manual and energy-free, therefore considered outside of system boundary.
- **C2, Transport to Waste Processing:** A transport distance of 80 km is assumed for landfill, using 16-32 tonne lorry EURO5 standard HGVs at 50% load factor, consistent with standard upstream assumptions.
- **C3, Waste Processing:** No additional waste processing is required, therefore the C3 module is considered outside of the system boundary.
- **C4, Disposal:** The Planter Protect Product is assumed to be disposed of by landfilling.
- **D, Benefits and Loads:** No benefits and loads are quantified for the Planter Protect Standard Product due to lack of data tracking. However, in future EPD's the implementation of benefits due to recycling shall be implemented.

The Planter Protect Product is designed to be returned for repurposing/reuse within a closed-loop approach. However, as this is a new product, robust primary data on return rates, reverse logistics, inspection/cleaning, and repurposing yields is not yet available. Therefore, no benefits from take-back, reuse, or material recovery are included in the reported results. The end-of-life modelling in this study remains conservative and assumes disposal to landfill (Modules C2 and C4). This assumption will be reviewed and updated when verified operational data becomes available.

The landfill scenario applied in this EPD should therefore be understood as a conservative modelling assumption rather than the intended or designed end-of-life route for the product. The true end-of-life route for the product is likely to have recycling and reuse due its production specifications.



Content Declaration

Full details on the material subcomponent composition for the representative product are provided in Table 3. Note that Planter Protect operate as a zero-packaging company and therefore there is no packaging declaration or quantification. GRP Solutions provide the resin with a verified recycled PET content produced from end-of-life plastic bottles.

Table 3. Full details on the subcomponents and materials for the Representative Planter Protect Standard Product

Product Component	Weight (kg/DU)	Percentage of Product (wt.%)	Post-consumer recycled material (wt.%)	Biogenic material content (kg C/DU)
Resin	4.50	62%	17%	0
Chopped Strand Matt	1.80	25%	0%	0
Catalyst	0.11	1%	0%	0
Gel	0.81	11%	0%	0
Pigment	0.068	1%	0%	0
Coating	0.0016	0%	0%	0
Total	7.29			

Reference Service Life

Under normal conditions of use and maintenance, the expected service life of Planter Protect Standard Product is 25 years plus, aligning with the typical lifespan of planter joinery and interior/exterior fit-out elements.

Substances of High Concern

This product contains no identified Substances of Very High Concern according to the limits provided by the European Chemicals Agency.



LCA Information

This covers the information in which the EPD is based upon.

Databases and LCA Software Used

Material and process environmental impact factors were taken from Ecoinvent 3.9.1. Calculations were carried out in SimaPro 9.6.0.1 and Excel. EF3.1 package was utilised in this LCA.

Declared Unit

The declared unit for the Planter Protect Standard Product was per m² of product. An area density of 7.29 kg/m² is given for the product to enable conversion into a product mass. The thickness of all products is 5 mm as standard. Consequently, a density of the product is quantified at 1,457.02 kg/m³.

Time Representativeness

The data collected to complete the analysis for the project was obtained in the 2024/2025 financial year.

Geographical Scope

This product is only produced in the United Kingdom as such this is the only geography covered.



LCA Scope

This EPD covers the production stages (A1-A3) and end-of-life management stages (C1 to C4, and D). Covering all environmental impacts, resource use, waste generated, and output flows as required by EN 15804. Use stage (B1-B7) is not included based on no material impacts identified and due to the passive use of the product. No demolition processes could be isolated with the product thus C1 was not considered. No energy use was quantified for the C1 module. No recycling or energy recovery processes could be attributed thus no C3, or D impacts were considered within the LCA. No impacts were declared for C3 as the product is considered to be landfilled within the LCA.

Table 4. Modes Declared as part of this Environmental Product Declaration.

Module	Product stage			Distribution / installation stage		Use stage							End-of-life stage				Beyond product life cycle
	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
Modules declared	X	X	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X
Geography	UK	UK	UK	ND	ND	ND	ND	ND	ND	ND	ND	ND	UK	UK	UK	UK	UK
Share of primary data		14%		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-
Variation – products		0.9%		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites		0%		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-



System Boundaries

Cradle-to-gate with modules A1-A3 and C2-C4. The system boundary of the EPD is defined using the modular approach set out in EN 15804. As well as the core processes, the system therefore includes production of all raw materials and components from basic resources; transport of those materials at all stages up to the manufacturing facility; transport of finished product to site; transport of all wastes and emissions associated with the disposal of the wastes. Capital equipment in the foreground system is excluded. Non-reusable packaging used to deliver products and/or components to the place of installation is not included in the LCA.

The product life cycle covered by this EPD is illustrated below.

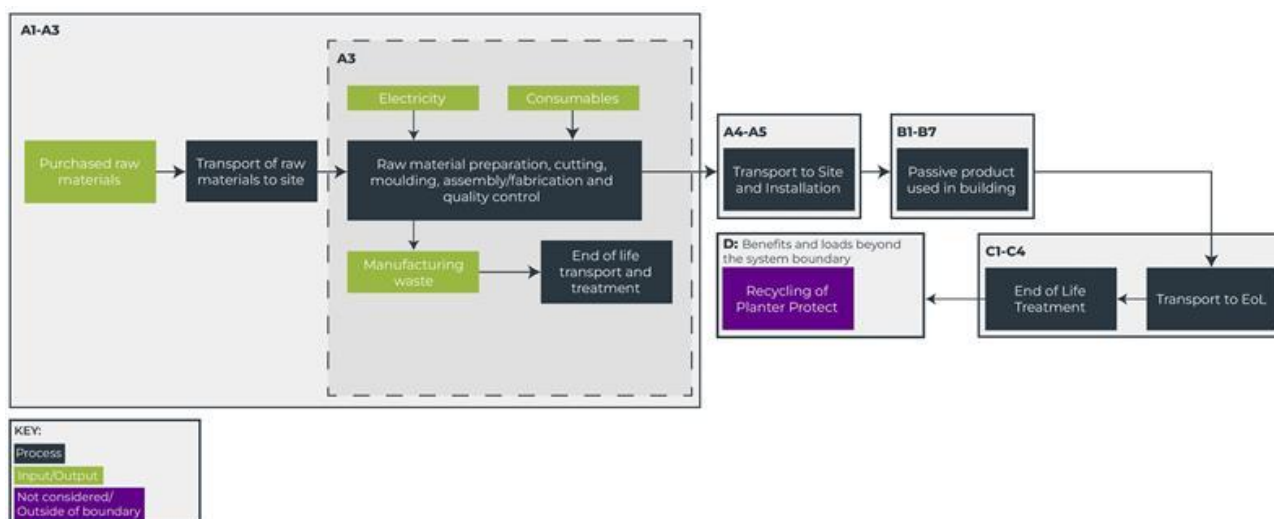


Table 5. Process sources databases and share of primary data for A1-A3 GWP-GHG.

Process	Source Type	Source	Reference year	Data category	Share of primary data, of GWP-GHG results for A1-A3
Product Materials	Database	Ecoinvent v3.9.1	2024/2025 Financial Year	Secondary	0%
Consumables	Database	Ecoinvent v3.9.1	2024/2025 Financial Year	Secondary	0%
Upstream Transport	Database	Ecoinvent v3.9.1	2024/2025 Financial Year	Primary	11%
Manufacturing	Database	Ecoinvent v3.9.1	2024/2025 Financial Year	Primary	3%
End of Life Processing and Transport	Database	Ecoinvent v3.9.1	2024/2025 Financial Year	Secondary	0%
Total share of primary data, of GWP-GHG results for A1-A3					14%



Cut-off Criteria

The collected data covered all raw materials and consumables; associated transport to manufacturing sites; process energy; direct production wastes; emissions to air and water.

According to EN 15804 this assessment includes a minimum of 99% of total inflows (mass and energy) per unit process and 95% of total inflows (mass and energy) per life-cycle stages A1-A3, A4-A5 and C1-C4, aggregated modules B1-B5 and B6-B7, and module D. In addition, according to the PCR an expanded 5% cut-off rule of ISO 21930 is applied, which says that at least 95% of the environmental impact per such aggregated module shall be included. These 1% and 5% cut-offs do not include LCI data that are explicitly outside the system boundary.

Data Sources & Data Quality

The producer-specific data used in LCA calculations are based on 1-year averaged data and have been updated within the last 5 years. These data were checked to ensure that sufficient materials and water are included within the inputs to account for all products, wastes and emissions.

Data quality was assessed using the Product Environmental Footprint Data Quality Rating methodology. The dataset achieved a geographical representativeness score of 2.34, technological representativeness score of 2.19, and temporal representativeness score of 1.98, resulting in an overall Data Quality Rating of 2.17. According to the PEF rating scale, this indicates that the overall data quality is classified as good.

Background Data

Background (generic) data from the Ecoinvent database (v3.9.1) fulfil the EN 15804 requirement that generic data used in the LCA have been updated within the last 10 years.

The quality of generic data has been reviewed; where necessary, data in the core Ecoinvent 3 database have been adjusted to better reflect available information about Planter Protect specific supply chain and about processes that contribute significantly to the LCA results.

Other data were judged fit for purpose. No environmental impact potential stemming from proxy data exceeds 10% for any impact category.

Allocation

In the background data, allocation is applied to all processes except those in which secondary materials are used, where the "cut-off" allocation is applied. This ensures that secondary materials are free of upstream burdens that arise prior to their reaching the "end of waste" state, in accordance with Section 6.3.4.2 of EN 15804. No other allocation procedures have been applied in this assessment.

Assumptions & Estimates

Inputs to and outputs from the system are accounted for over a 100-year time period, except for biogenic carbon. Long-term emissions are therefore omitted from the impact assessment part of the LCA, except for biogenic carbon releases from waste disposal to which no time cut-off is applied.

The "primary energy used as material" indicators (PERM; PENRM) are calculated using - as characterisation factors - published values for constituent materials which can yield energy on combustion, where available, and from published calorific values where PEM values are not available.



"Primary energy as fuel" indicators (PENRE, PERE) are calculated as the total primary energy demand minus primary energy used as material.

Proxy data were applied to represent the silane-based coupling agent (component in chopped strand matt), sorbic acid (component in catalyst), additives (component in pigment), oleic acid (component in coating) and cardboard (component in consumable) due to limitations in available data. The assumptions made were deemed as reasonable approximation of the chemical contents of the components.

Transport distances from supplier facilities were calculated using route and mileage data obtained from Google Maps. The modes of transport (HGV and sea freight) were specified by Planter Protect. For goods transported *via* sea freight, it was assumed that materials were first delivered by HGV to the largest international port in the country of origin, then shipped to the UK's primary port, Felixstowe. Upon arrival, they were transported by HGV to the manufacturing site.

Electricity used in manufacturing processes is assumed to be from the UK national grid and inclusive of transmission and distribution losses.

In module C2 for the transport of materials to disposal site, the assumed distance to local centre of 80 km is given.



Environmental Performance Indicators

This EPD contains environmental information in the form of quantitative indicator values for a number of parameters, which encompass calculated environmental impact potentials, resource and energy use, waste generation and material and energy outputs from the product system that may be reused, recycled or recovered into other, unspecified product life cycles. These parameters are listed below along with the abbreviations used for them in the tables of indicator values that follow.

Table 6.1 - Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator 2 - The GWP-GHG indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO₂ is set to zero. This indicator is closely comparable to the GWP indicator originally defined in EN 15804:2012+A1:2013.

Environmental Impact (EI) Factor (EN 15804:2012 + A2:2019) –	Acronym	Unit
Global warming potential - total	GWP-total	kg CO ₂ eq.
Global warming potential - fossil fuels	GWP-fossil	kg CO ₂ eq.
Global warming potential - biogenic	GWP-biogenic	kg CO ₂ eq.
Global warming potential - land use and land use change	GWP-luluc)	kg CO ₂ eq.
Depletion potential of the stratospheric ozone layer	ODP	kg CFC-11 eq.
Acidification potential, accumulated exceedance	AP	mol H ⁺ eq.
Eutrophication potential - freshwater (EP-freshwater)	EP-freshwater	kg P eq.
Eutrophication potential - marine (EP-marine)	EP-marine	kg N eq.
Eutrophication potential - terrestrial (EP-terrestrial)	EP-terrestrial	mol N eq.
Photochemical ozone creation potential (POCP)	POCP	kg NMVOC eq.
Abiotic depletion potential - non-fossil resources (ADPE)	ADPE	kg Sb eq.
Abiotic depletion potential - fossil resources (ADPF)	ADPF	MJ, net calorific value
Water (user) deprivation potential (WDP)	WDP	m ³ world eq. deprived
Resource Use	Acronym	Unit
Renewable Primary Energy as Energy Carrier	PERE	MJ
Renewable Primary Energy Resources as Material Utilisation	PERM	MJ
Total Renewable Primary Energy Use (sum of the two parameters above)	PERT	MJ
Non-Renewable Primary Energy As Energy Carrier	PENRE	MJ
Non-Renewable Primary Energy Resources As Material Utilisation	PENRM	MJ
Total Non-Renewable Primary Energy Use (sum of the two parameters above)	PENRT	MJ
Use of Secondary Material	SM	MJ
Use of Renewable Secondary Fuels	RSF	MJ
Use of Non-Renewable Secondary Fuels	NRSF	MJ
Net Use of Fresh Water	FW	m ³
Waste Generated	Acronym	Unit
Hazardous Waste Disposed	HWD	kg
Non-Hazardous Waste Disposed	NHWD	kg
Radioactive Waste Disposed	RWD	kg
Output Flows	Acronym	Unit
Components for Re-use	CRU	kg
Materials for Recycling	MFR	kg
Materials for Energy Recovery	MER	kg
Exported Energy - Electrical	EEE	MJ
Exported Energy - Thermal	EET	MJ



Additional mandatory and voluntary impact category indicators declared nomenclature in this assessment are displayed in Table 7.

Table 7. Nomenclature of additional mandatory and voluntary impact category indicators declared in this assessment.

Environmental Impact (EI) Factor (EN 15804:2012 + A2:2019)	Acronym	Unit
Global warming potential	GWP-GHG	kg CO2 eq.

Environmental Performance Indicator Results

Environmental indicator results for the declared modules are shown in the following tables based on the declared unit: 1 m² of Planter Protect Product. These estimated impact results are only relative statements, which do not indicate the endpoints of the impact categories, exceeding threshold values, safety margins and/or risks.

The A1 - A3 modules are shown on an aggregated basis as required by the PCR; the results of modules A1-A3 should not be used without considering the results of module C.



Table 8. Full environmental impact, resource use, waste generated, and output flow metrics measured for one declared unit of the Planter Protect Product. Declared unit = 1 m² of Planter Protect Product. * Disclaimer: 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 experienced with the indicator.

El Factor	Unit	A1 - A3	C1	C2	C3	C4	D
GWP-total	kg CO2 eq.	2.82E+01	0.00E+00	1.10E-01	0.00E+00	4.36E-03	0.00E+00
GWP-fossil	kg CO2 eq.	2.80E+01	0.00E+00	1.10E-01	0.00E+00	4.35E-03	0.00E+00
GWP-biogenic	kg CO2 eq.	1.81E-01	0.00E+00	9.92E-05	0.00E+00	6.00E-06	0.00E+00
GWP-luluc)	kg CO2 eq.	2.61E-02	0.00E+00	5.33E-05	0.00E+00	1.18E-06	0.00E+00
ODP	kg CFC-11 eq.	6.96E+00	0.00E+00	2.39E-09	0.00E+00	6.81E-11	0.00E+00
AP	mol H+ eq.	1.70E-01	0.00E+00	3.58E-04	0.00E+00	5.33E-05	0.00E+00
EP-freshwater	kg P eq.	1.68E-02	0.00E+00	7.68E-06	0.00E+00	2.37E-07	0.00E+00
EP-marine	kg N eq.	4.21E-02	0.00E+00	1.23E-04	0.00E+00	2.39E-05	0.00E+00
EP-terrestrial	mol N eq.	5.01E-01	0.00E+00	1.30E-03	0.00E+00	2.59E-04	0.00E+00
POCP	kg NMVOC eq.	8.32E+00	0.00E+00	5.35E-04	0.00E+00	7.22E-05	0.00E+00
ADPE*	kg Sb eq.	1.12E+01	0.00E+00	3.52E-07	0.00E+00	1.52E-08	0.00E+00
ADPF*	MJ, net calorific value	5.63E+02	0.00E+00	1.56E+00	0.00E+00	5.55E-02	0.00E+00
WDP*	m ³ world eq. deprived	2.36E+02	0.00E+00	6.34E-03	0.00E+00	1.28E-04	0.00E+00
Resource Use	Unit	A1 - A3	C1	C2	C3	C4	D
PERE	MJ	7.35E+01	0.00E+00	2.42E-02	0.00E+00	8.12E-02	0.00E+00
PERM	MJ	8.11E-02	0.00E+00	0.00E+00	0.00E+00	-8.11E-02	0.00E+00
PERT	MJ	7.36E+01	0.00E+00	2.42E-02	0.00E+00	1.64E-04	0.00E+00
PENRE	MJ	6.37E+02	0.00E+00	1.65E+00	0.00E+00	1.57E+02	0.00E+00
PENRM	MJ	1.57E+02	0.00E+00	0.00E+00	0.00E+00	-1.57E+02	0.00E+00
PENRT	MJ	7.93E+02	0.00E+00	1.65E+00	0.00E+00	1.64E-02	0.00E+00
SM	MJ	8.05E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m ³	1.14E+00	0.00E+00	2.22E-04	0.00E+00	1.44E-06	0.00E+00
Waste Generated	Unit	A1 - A3	C1	C2	C3	C4	D
HWD	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NHWD	kg	2.80E+00	0.00E+00	0.00E+00	0.00E+00	7.29E+00	0.00E+00
RWD	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Output Flows	Unit	A1 - A3	C1	C2	C3	C4	D
CRU	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EET	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00



Additional mandatory and voluntary impact category indicators declared in this assessment are displayed in Table 9.

Table 9. Additional mandatory and voluntary impact category indicators declared in this assessment. ¹ This indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO₂ is set to zero.

Acronym	Unit	A1-A3	C1	C2	C3	C4	D
GWP-GHG ¹	kg CO ₂ eq.	2.80E+01	0.00E+00	1.10E-01	0.00E+00	4.36E-03	0.00E+00

Additional Information

Interpretation

Indicator values obtained for resource depletion (ADPE, ADPF), stratospheric ozone depletion (ODP) and water deprivation (WDP) potential should be used with caution; all are subject to uncertainties in data or method which limit the scope for their use as the basis for comparisons.

Activities upstream in Planter Protect Ltd.'s supply networks contribute strongly to the environmental indicator values reported in this EPD. Evaluation of the data available to represent these activities identified various sources of uncertainty which influence those indicator values. The uncertainty associated with the declared values is considered to be at least +/-10% for the climate change category and is likely higher for other categories.

No untreated wastes leave the modelled system, which includes waste treatment activities as required by EN 15804. The waste indicators HWD, NHWD and TRWD presented in this EPD therefore represent waste flows within the modelled system.

Environmental indicator results are shown in the Table 8 for the declared unit of 1 m² of Planter Protect Standard Product; modules A1 - A3 are shown on an aggregated basis.



Abbreviations

Abbreviation	Definition
EN	European Norm (Standard)
EF	Environmental Footprint
GPI	General Programme Instructions
ISO	International Organization for Standardization
CEN	European Committee for Standardization
CLC	Co-location centre
CPC	Central product classification
GHS	Globally harmonized system of classification and labelling of chemicals
GRI	Global Reporting Initiative
SVHC	Substances of Very High Concern
ND	Not Declared
LCA	Life cycle assessment
PCR	Product Category Rules
c-PCR	Complementary Product Category Rules
CEN	European Committee for Standardization
GHG	Greenhouse Gas
PEF	Product Environmental Footprint
CO ₂ e	Carbon Dioxide Equivalent
DU	Declared Unit
EI	Environmental Impact
LCI	Lifecycle Inventory
MJ	Megajoule
NMVOG	Non-Methane Volatile Organic Compounds
SE	Sweden
UK	United Kingdom

References

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General Program Instructions, Version 5.0, 2025-02-27 - The International EPD® System - EPD International AB

ISO 14001:2015 - Environmental management systems – Requirements with guidance for use

ISO 14025:2009-11 - Environmental labels and declarations - Type III environmental declarations - Principles and procedures.

PCR 2019:14 - Construction products, version 2.0.1, 2030-04-07 - The International EPD System - EPD

Version History

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