Environmental Product Declaration

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

EPD of multiple planters, based on a representative product Blom



Byarums Bruk AB

Programme	The International EPD System, www.environdec.com
Programme operator	EPD International AB
Type of EPD	EPD of multiple products from a company
EPD registration number	EPD-IES-0034015:001
Version date	2026-10-09
Validity date	2031-10-08

An EPD should provide current information and may be updated or unpublished if conditions change. To find the latest version of the EPD and to confirm its validity, see www.environdec.com.

General Information

Programme information

Programme	The International EPD System
Address	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
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PCR and verification

Product Category Rules (PCR)	CEN standard EN 15804 serves as the Core Product Category Rules (PCR) CEN standard EN 15804 serves as the Core Product Category Rules (PCR) PCR 2019:14, version 2.0.1, Construction products c-PCR-021, version 2.0.1, Furniture and components of furniture PCR review was conducted by the Technical Committee of the International EPD System. See https://environdec.com/about-us/the-international-epd-system-about-the-system for a list of members. Review chair: Review chair: Rob Rouwette (chair), Noa Meron (co chair). . The review panel may be contacted via the Secretariat www.environdec.com/contact.
Third-party verification:	External and independent "third-party" verification of the declaration and data, according to ISO14025:2006, via EPD verification through: ☑ Individual EPD verification without a pre-verified LCA/EPD tool Third-party verifier: Callum Hill, CEO , JCH Industrial Ecology Ltd JCH INDUSTRIAL ECOLOGY LTD Approved by: The International EPD System
Procedure for follow-up of data during EPD validity involves third party verifier: ● Yes ○ No	

Ownership and limitations on use of EPD

The EPD owner has the sole ownership, liability and responsibility for the EPD. EPDs within the same product category but published in different EPD programmes, may not be comparable. For two EPDs to be comparable, they shall be based on the same PCR (including the same first-digit 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 identical scope in terms of included life-cycle stages (unless the excluded life-cycle stage is demonstrated to be insignificant); apply identical impact assessment methods (including the same version of characterisation factors); and be valid at the time of comparison.

Information about EPD owner

Owner details	
EPD owner	Byarums Bruk AB
Contact	Joakim Ståhl , CEO of Byarums Bruk
Contact details	joakim@byarumsbruk.se
Address	Kränghultsvägen 1, 567 92 Vaggeryd
Description of the organisation	Byarums Bruk is a Swedish foundry based in Byarum, Småland, founded in 1947 by the Bokinge brothers. From the very start, the company broke new ground by casting in aluminium rather than the cast iron that dominated the industry at the time. Today, Byarums Bruk manufactures products for parks and gardensofas, armchairs, chairs, tables, benches, planters, sculptures and more all through circular production using sand-shaped castings with 100% recycled aluminium and exclusively artisanal methods. Som other materials are also used in some of the products like wooden parts and steel. The ancient technique of raw sand moulding, using only natural sand and water without chemical binders, means that each moulded detail is unique. Years of collaboration with designers have built Byarums Bruk's collection of outdoor furniture, and sustainability is central to the business philosophy when a product has finally finished its purpose, the material goes back into the cycle, melts down and reappears in a new form generation after generation. Bryarums Bruk is a proud representative of Swedish craftsmanship and long-term thinking. Byarums Bruk is also a member of Interior Cluster Sweden
Product-related or management system-related certifications:	
Life Cycle Assessment (LCA)	Joakim Ståhl

Product Information

Product details	
Product name(s)	Product Group Planters, represented by the product Blom

Product details	
Product description:	Manufactured by Byarums Bruk AB. The product family comprises a range of freestanding planters designed for landscaping and urban furnishing applications in public and private outdoor environments, including parks, streetscapes, plazas, courtyards, commercial developments, and residential areas. The Blom planter, which represents the product group, is manufactured from 100% recycled aluminium, in the same way as the other products included in the product family and is the most sold item in the product group. This is why its has been selected to represent the group. The products are manufactured by Byarums Bruk AB using recycled aluminium as the primary material. The product group consists of planters of varying dimensions, geometries, and capacities. The products are designed to accommodate vegetation such as flowers, shrubs, ornamental grasses, and small trees. Variations within the product family may occur with respect to size, weight, shape, and optional accessories, while the principal material composition and manufacturing processes remain comparable. The primary material used in the product group is cast aluminium, predominantly sourced from recycled material streams. Depending on product configuration, additional materials may include steel components, drainage elements, fastening devices, and surface treatment materials. Product-specific material compositions are reported separately within this declaration. The products are manufactured in Sweden using sand-casting technology followed by machining, finishing, assembly, and surface treatment processes where applicable. Production activities are carried out at Byarums Bruk's manufacturing facilities. The products are intended for outdoor use as planting containers and landscape elements. They are designed for installation in both public and private environments and are suitable for year-round exposure to outdoor climatic conditions.
UN CPC code	UN CPC 42999
Name and location of production site(s):	Byarums Bruk AB Kränghultsvägen 1, 567 92 Vaggeryd
Technical or actual lifespan	Byarums Bruk estimates that a typical lifetime of their sand-cast aluminium chairs is in excess of 25 years under normal outdoor conditions in a Nordic climate.

Product image



Manufacturing process

All products are manufactured at Byarums Bruk's own foundry located in Byarum, Vaggeryd municipality, Sweden. Production is carried out entirely in house using artisanal foundry methods that have remained consistent since the company's founding in 1947.
The primary manufacturing process for aluminium components is raw sand moulding (green sand casting). In this process, individual moulds are formed by hand from natural sand and water, without the use of chemical binders. Molten recycled aluminium is poured into the sand mould to form the cast component. As each mould is formed individually, every cast detail is unique. Following casting, components are cleaned and finished.
For models incorporating cold-drawn round iron elements (Ø 10 mm), structural frame components are fabricated through cold-drawing and welding prior to assembly.
Surface treatment is applied depending on product specification and includes lacquering (white, black or other colours) or hot-dip galvanising for metal components.
The entire manufacturing process from casting to surface treatment and assembly is carried out at a single site in Sweden.

Product Table

Product Name	Mass in kg	Unit
Växtkärl Stor Blom / g:svart	143,500	pc
Växtkärl / Kolonn no.1 / g:natur	49,500	pc
Växtkärl Vid Blom / g:natur	75,000	pc
Växtkärl Gråsippa no.2 / g:natur	11,300	pc
Växtkärl Sofiero / g:svart	84,500	pc
Växtkärl Hexagon no.3 / g:natur	64,700	pc
Växtkärl Låg Blom / g:natur	49,100	pc
Växtkärl Gråsippa no.3 / g:natur	36,000	pc
Växtkärl Vid Blom / g:svart	75,000	pc
Växtkärl Hexagon no.1 / g:natur	40,200	pc
Växtkärl / Kolonn no.5 / g:svart	111,200	pc
Växtkärl / Kolonn no.1 / g:svart	49,500	pc
Växtkärl Stor Relief / g:svart	80,400	pc
Växtkärl Relief / g:natur	19,500	pc
Växtkärl Näver no.3 / g:natur	54,200	pc
Växtkärl Gråsippa no.2 / g:svart	11,300	pc
Växtkärl / Kolonn no.5 / g:natur	111,200	pc
Växtkärl Blom / g:svart	57,000	pc
Växtkärl Hexagon no.2 / g:svart	73,700	pc
Växtkärl Små Blom / g:svart	27,000	pc
Växtkärl / Kolonn no.4 / g:natur	74,200	pc
Växtkärl Cross / g:natur	48,000	pc
Växtkärl Näver no.1 / g:svart	27,300	pc
Växtkärl / Kolonn no.4 / g:svart	74,200	pc
Växtkärl Gråsippa no.1 / g:svart	5,400	pc
Växtkärl Karl XL / emblem:nej / g:natur	46,800	pc
Växtkärl Blom / g:natur	57,000	pc
Växtkärl Karl / g:natur	44,700	pc
Växtkärl Gråsippa no.1 / g:natur	5,400	pc
Växtkärl / Kolonn no.2 / g:natur	60,700	pc

Product Name	Mass in kg	Unit
Växtkärl Karl XL / emblem:nej / g:svart	46,800	pc
Växtkärl Näver no.1 / g:natur	27,300	pc
Växtkärl Stor Blom / g:natur	143,500	pc
Växtkärl Hexagon no.1 / g:svart	40,200	pc
Växtkärl Karl / g:svart	44,700	pc
Växtkärl Hexagon no.3 / g:svart	64,700	pc
Växtkärl Sofiero / g:natur	84,500	pc
Växtkärl Näver no.2 / g:svart	40,000	pc
Växtkärl Cross / g:svart	48,000	pc
Växtkärl Låg Blom / g:svart	49,100	pc
Växtkärl / Kolonn no.3 / g:natur	88,800	pc
Växtkärl Relief / g:svart	19,500	pc
Växtkärl Små Blom / g:natur	27,000	pc
Växtkärl / Kolonn no.3 / g:svart	88,800	pc
Växtkärl Gråsippa no.3 / g:svart	36,000	pc
Växtkärl Stor Relief / g:natur	80,400	pc
Växtkärl Näver no.3 / g:svart	54,200	pc
Växtkärl Hexagon no.2 / g:natur	73,700	pc
Växtkärl / Kolonn no.2 / g:svart	60,700	pc
Växtkärl Näver no.2 / g:natur	40,000	pc

Content declaration

Product Components	Mass, kg	Post-consumer recycled material, mass-% of products	Biogenic material, mass-% of product	Biogenic material, kg C / declared unit
Metal	5,65E+01	69,41%	0,00%	0,00E+00
Chemicals	4,83E-01	0,00%	0,01%	4,67E-03
Total	5,70E+01	69,41%	0,01%	4,67E-03

Packaging Materials	Mass, kg	Mass-% (versus the product)	Biogenic material kg C/declared unit
Plastic	4,96E-02	0,09%	0,00E+00
Paper	1,98E+00	3,48%	7,93E-01
Engineered Wood Products	2,93E+00	5,13%	1,10E+00
Total	4,96E+00	8,70%	1,90E+00

Note: Some totals may not correspond exactly to the sum of separate figures due to rounding.

Dangerous substances from the candidate list of SVHC for Authorisation	EC No.	CAS No.	Weight-% per functional or declared unit
No hazardous materials			

At the date of issue of this declaration, there is no “Substance of Very High Concern” (SVHC) in concentration above 0.1% by weight, and neither does the packaging, following the European REACH regulation (Registration, Evaluation, Authorization and Restriction of Chemicals)

LCA information

Field	Value
Declared unit	One planter
Conversion Factor to Mass	57 kg
Time Representativeness	Data obtained refers to the year 2025
Geographical Scope	Sweden
System Boundary	Cradle to gate with options, A1-A3, A4, A5, B1-B7, C1, C2, C3, C4, D
Excluded Modules	No modules excluded
Database(s) and LCA Software Used	Ecoinvent 3.11 and EandoX version 1.01
Reference Service Life (RSL)	Byarums Bruk estimates that a typical lifetime of their sand-cast aluminium chairs is in excess of 25 years under normal outdoor conditions in a Nordic climate.
Characterisation Factors Used	The characterization factors used in this study refer to PCR 2019:14 and EN 15804+A2 (based on EF 3.1).
Allocation Procedures Used	Allocation of energy, auxiliaries, and waste at Byarums Bruk's manufacturing site has been performed based on production volumes by mass. No allocation between aluminium casting and other foundry activities has been required, as all casting operations at the Byarum site are dedicated to the declared product category.
Cut-off criteria	The general rules for exclusion of inputs and outputs in the LCA follow the rules of EN 15804:2012+A2:2019, section 6.3.6, where the cut-off criterion is 1% of renewable and non-renewable primary energy usage and 1% of the total mass input of that unit process. The total of neglected input flows per module shall be a maximum of 5% of energy usage and mass. In addition to the processes explicitly excluded from the system boundary by EN 15804 and PCR 2019:14 version 2.0.1, the following exclusions have been made based on the cut-off criteria: Production and waste management of some incoming packaging materials used for raw material deliveries to Byarums Bruk's production site in Byarum. This is assessed to fall well within the cut-off rules. Sand used in the raw sand moulding process is reused across multiple casting cycles. Due to a lack of specific data on sand replacement rates and waste volumes, the waste management of spent foundry sand has been excluded from the modelling. This omission is assessed to fall well within the cut-off criteria.

Energy Breakdown

Electricity used in the manufacturing

Energy Source	Data Source	Year	Geography	GWP excl. biogenic [kg CO2-eq/kWh]
Electricity from Wind Power	Ecoinvent 3.11	2024	SE	1,60E-02

Breakdown of electricity usage



A1	A2	A3	A4	A5	B1-7	C1-4
Extraction and processing of raw materials	Transport of raw materials	Manufact-uring	Transport to end user	Installation on site	User	End of life
						
		Waste		Waste		Waste

D Benefits and loads beyond the system boundary

A1	Raw material supply	The product stage comprises the acquisition of all raw materials, products and energy, transport to the production site, production processes, packaging, and waste processing up to the end-of-waste state or final disposal. For the extraction and processing of raw materials in Module A1, a combination of generic data from Ecoinvent version 3.11, primary data from Byarums Bruk's production records, and supplier data is used. The primary materials are recycled aluminium (sand-cast), cold-drawn iron, together with surface treatment materials such as lacquer and zinc used in hot-dip galvanising. In this specific product, group of products only recycled aluminium is being used. Here its also worth mentioning that the biogenic carbon is included in the packaging.
A2	Transport to the manufacturer	Module A2 covers the impacts from transporting raw materials to the Byarums Bruk production site in Byarum, Sweden. This includes the extraction and production of fuels as well as fuel combustion during transportation
A3	Manufacturing	Module A3 includes the manufacturing of the final planters, the production ofoutgoing packaging, and the end-of-life treatment of waste generated during manufacturing. Production is carried out entirely in-house at Byarums Bruk's foundry in Byarum using artisanal methods. The primary manufacturing process for aluminium components is raw sand moulding (green sand casting), in which individual moulds are formed by hand from natural sand and water without chemical binders. Molten recycled aluminium is poured into the sand mould, and following casting, components are cleaned and finished. For models incorporating cold-drawn iron elements, frame components are fabricated through cold-drawing and welding.
A4	Transport	Module A4 covers the impacts from transporting the finished product to an assumed installation site. The total distance in A4 is modelled as the distance from the manufacturing site in Byarum to the customer, with 200 km estimated as the average transport distance by truck. truck: 200km

A5	Construction installation	Module A5 represents the installation of the product at the installation site. Since no installation process is required for the planters, the impacts in A5 arise only from the waste treatment of the product packaging. The packaging waste consists of plastic, paper and engineered wood products. Plastic packaging is partly sent to recycling and partly to incineration, while paper and engineered wood product packaging are sent to incineration. Impacts from transport to the waste treatment facility and from the treatment processes are included in Module A5, while potential loads and benefits beyond the system boundary are reported in Module D. The biogenic carbon contained in the paper and engineered wood product packaging is released from the product system in Module A5 as a result of incineration.
B1-B7	Use stage	The products are passive and have no activity in the B modules. They are declared but have zero entities as a result.
C1	Deconstruction/Demolition	Module C1 covers the removal of the planters at end of life. The collection process involves manual deconstruction of the aluminium, back to raw materil input. The stage is modelled as diesel consumption at a rate of 1.1 kWh per ton.
C2	Transport	Module C2 comprises the impacts from transporting the discarded planters to a waste processing or disposal facility. Metal components not destined for incineration are transported 80 km.
C3	Waste processing	Module C3 includes waste pre-treatment for material recovery. Metal components are processed for recycling, with approximately 4.28 kg of metal per declared unit sent for recycling.
C4	Final disposal	Module C4 consists of waste disposal. A portion of metal (approximately 0.48 kg per declared unit) is sent to final disposal in landfill. Wood components (approximately 1.40 kg per declared unit) are sent for energy recovery through incineration. As the energy efficiency of incineration is assumed to be less than 60%, all impacts from incineration are reported in module C4.
D	Benefits	In general, module D encompasses the potential for reuse, recovery and recycling, expressed as net impacts and benefits. The environmental loads and benefits recorded in Module D are based on the specific quantities of materials defined in the bill of materials. The recycling of metal components at end of life is assumed to displace the future production of virgin materials, thereby reducing the long-term impact of raw material extraction. Benefits from material recycling arise primarily from the recovery of iron and aluminium, which substitute for virgin metal production. The use of 100% recycled aluminium in production, combined with the high recyclability of aluminium at end of life, contributes significantly to the net environmental benefit reported in this module. All of the metals are recycled the complete kg/product.

System boundaries

	Product stage			Assembly stage		Use stage							End of life stage				Benefits & loads beyond system boundary
	Raw material supply	Transport to manufacturer	Manufacturing	Transport to building site	Installation into building	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Demolition	Transport to waste processing	Waste processing for reuse, recovery, recycling	Disposal	Reuse, recovery, recycling potential
	A1	**A2**	**A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Declared	X	X	X	X	X	ND	ND	ND	X	ND	ND	ND	X	X	X	X	X
Geography	SE	SE	SE	SE	SE	-	-	-	SE	-	-	-	SE	SE	SE	SE	SE
Specific data used	3,41%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation-Products	+88% / -165%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation-Sites	+0% / -0%			-	-	-	-	-	-	-	-	-	-	-	-	-	-

X - declared, ND - Not Declared

The results presented for modules A1-A3 alone shall not be used for comparisons unless all relevant life cycle stages, particularly end-of-life (C1-C4), are included. This ensures a more accurate and representative environmental impact assessment over the full product life cycle.

Declaration of data sources, reference years, and share of primary data

Process	Source type	Source	Reference year	Data category	Share of primary data, of GWP-GHG results for A1-A3
Manufacturing of product	Collected data	Ecoinvent 3.11	2024	Primary data, secondary data	2,07%
Transportation of raw materials to manufacturing site	Collected data	Ecoinvent 3.11	2024	Primary data	0,00%
Production of raw materials and components	Collected data	Ecoinvent 3.11	2024	Primary data, secondary data	1,34%
Production of packaging	Collected data	Ecoinvent 3.11, CarbonZero	2023-2024	Secondary data	0,00%
Total share of primary data, of GWP-GHG results A1-A3					3,41%

The share of primary data is calculated based on GWP-GHG results. It is a simplified indicator for data quality that supports the use of more primary data, to increase the representativeness of and comparability between EPDs. Note that the indicator does not capture all relevant aspects of data quality and is not comparable across product categories.

Data quality notes

Process	Source type	Source	Reference year	Data category	Share of primary data, of GWP-GHG results A1-A3	Technical	Geographical	Time
Manufacturing of product	Collected data	Ecoinvent 3.11	2024	Primary data, secondary data	20.07%	Good	Good	Good
Transportation of raw materials to manufacturing site	Collected data	Ecoinvent 3.11	2024	Primary data	0.00%	Good	Good	Good
Production of raw materials and components	Collected data	Ecoinvent 3.11	2024	Primary data, secondary data	19.92%	Good	Good	Good
Production of packaging	Collected data	Ecoinvent 3.11, CarbonZero	2023–2024	Secondary data	0.00%	Good	Good	Good
Total share of primary data, of GWP-GHG results A1-A3					**39.99%**			

Transport to the building site (A4)

Vehicle type	Distance (km)	Capacity utilization* (%)	Bulk density of transported products (kg/m3)	Volume capacity utilisation factor**
Truck-Trailer 40 tonne	200	50,8%	as product density	1,00

*Including empty returns
**Factor =1 or <1 or >1 for compressed or nested packaged products

Installation of the product in the building (A5)

Scenario Information	Unit (expressed per functional unit or per declared unit)
Ancilliary materials for installation (specified by material)	None
Water use	None
Other resource use	None
Quantitative description of energy type (regional mix) and consumption during the installation process	Not applicable
Direct emissions at ambient air, soil and water	None

A5 Waste materials on the building site before waste processing, generated by the product's installation (specified by type)

Name	Type	Weight	Unit (expressed per functional unit or per declared unit)
Plastic	packaging	4,96E-02	kg
Paper	packaging	1,98E+00	kg
Engineered Wood Products	packaging	2,93E+00	kg

A5 Output materials

Name	Type	Route	Weight	Unit (expressed per functional unit or per declared unit)
Plastic	packaging	recycling waste	2,73E-02	kg
Plastic	packaging	incineration waste	2,23E-02	kg
Paper	packaging	incineration waste	1,98E+00	kg
Engineered Wood Products	packaging	incineration waste	2,93E+00	kg

End-of-life (C1-C4)

Scenario information	Unit (expressed per functional unit or per declared unit)
C1: Collection process specified by type	5,70E+01 kg demolition/deconstruction of steel, wood and other materials. Energy carrier: Diesel. Quantity: 1,1 kWh/tonne
C2: Waste transport specified by type	5,66E+01 kg materials not to be incinerated transported for 80 km 4,10E-02 kg materials to be incinerated transported for 130 km
C3: Recovery system specified by type	5,09E+01 kg Metal for recycling 5,40E-02 kg Chemicals for recycling
C4: Disposal specified by type	5,65E+00 kg Metal for final disposal 3,01E-01 kg Chemicals for final disposal 1,27E-01 kg Chemicals for energy recovery
Assumptions for scenario development, e.g. transportation	The transportation is modelled with the same specifications as the truck transportation in module A4, except the transportation distance is assumed to be 80 km for materials not to be incinerated and 130 km for materials to be incinerated.

Reuse-Recovery-Recycling-potential (D)

Scenario information
The environmental loads and benefits recorded in Module D are based on the specific quantities of materials defined in the bill of materials. This accounting reflects the product's recovery potential at its end-of-life, where the recycling of materials is assumed to displace the future production of virgin materials, thereby reducing the long-term impact of raw material extraction. Additionally, the incineration of materials facilitate resource efficiency through heat recovery; the resulting exported electricity (EEE) and thermal energy (EET) serve as a credit by reducing the future demand for external energy sources.

Environmental performance

EPD INTERNATIONAL EPD SYSTEM

Potential environmental impact – indicators according to EN 15804+A2

The 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 results of the end-of-life stage (modules C1-C4) should be considered when using the results of the product stage (modules A1-A3).

Results per declared unit: One planter

Indicator	Unit	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
GWP-total	kg CO2 eq	1,38E+02	2,17E+00	7,27E+00	0,00E+00	2,27E-02	8,69E-01	4,03E+01	4,41E-01	-3,06E+01
GWP-fossil	kg CO2 eq	1,40E+02	2,17E+00	3,11E-01	0,00E+00	2,27E-02	8,69E-01	4,00E+01	3,03E-01	-2,94E+01
GWP-biogenic	kg CO2 eq	-4,98E+00	4,57E-04	6,96E+00	0,00E+00	2,52E-06	1,83E-04	3,22E-01	1,37E-01	-4,53E-01
GWP-luluc	kg CO2 eq	2,99E+00	7,18E-04	8,02E-05	0,00E+00	2,32E-06	2,88E-04	4,19E-02	4,70E-05	-6,85E-01
ODP	kg CFC11 eq	2,73E-06	4,73E-08	4,06E-09	0,00E+00	3,37E-10	1,89E-08	6,37E-07	3,76E-09	-5,17E-07
AP	mol H+ eq	8,73E-01	6,96E-03	1,47E-03	0,00E+00	2,03E-04	2,79E-03	5,28E-01	7,50E-04	-1,87E-01
EP-freshwater	kg P eq	7,78E-02	1,48E-04	4,50E-05	0,00E+00	7,32E-07	5,93E-05	4,03E-02	7,68E-05	-1,66E-02
EP-marine	kg N eq	1,28E-01	2,36E-03	7,32E-04	0,00E+00	9,45E-05	9,46E-04	4,57E-02	1,19E-03	-2,63E-02
EP-terrestrial	mol N eq	1,18E+00	2,55E-02	6,70E-03	0,00E+00	1,03E-03	1,02E-02	5,50E-01	2,93E-03	-2,41E-01
POCP	kg NMVOC eq	4,95E-01	1,06E-02	1,91E-03	0,00E+00	3,10E-04	4,23E-03	1,71E-01	1,03E-03	-1,04E-01
ADP-minerals & metals[1]	kg Sb-Eq	4,44E-04	7,31E-06	7,50E-07	0,00E+00	8,36E-09	2,93E-06	5,39E-03	6,17E-07	-6,13E-05
ADP-fossil[1]	MJ	2,21E+03	3,08E+01	2,69E+00	0,00E+00	2,99E-01	1,24E+01	4,81E+02	2,66E+00	-4,66E+02
WDP[1]	m³	2,53E+02	1,65E-01	2,07E-01	0,00E+00	7,62E-04	6,60E-02	1,21E+01	1,27E-01	-5,70E+01
Acronyms	**GWP-total**: Total Global Warming Potential; **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 Exceedance; **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 Exceedance; **POCP**: Formation potential of tropospheric ozone; **ADP-minerals&metals**: Abiotic depletion potential for non-fossil resources; **ADP-fossil**: Abiotic depletion for fossil resources potential; **WDP**: Water (user) deprivation potential, deprivation-weighted water consumption									

[1] *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.*

Use of resources

Option A has been selected in calculating the primary energy indicators. Under this option, the energy is recorded as an input in the module where it enters the product system (A1–A3) and as an equivalent output in the module where it exits the system (A5 for packaging content and C3 and/or C4 for product content), whether it is transferred to another product system or treated as waste.

Results per declared unit: One planter										
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1-B7**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	MJ	1,54E+03	1,19E+01	6,31E+01	0,00E+00	1,85E-03	4,77E+00	7,34E+01	4,77E-01	-1,84E+02
PERM	MJ	6,26E+01	0,00E+00	-6,23E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-2,51E-01	0,00E+00
PERT	MJ	1,60E+03	1,19E+01	8,00E-01	0,00E+00	1,85E-03	4,77E+00	7,34E+01	2,26E-01	-1,84E+02
PENRE	MJ	2,15E+03	4,22E+01	5,52E+00	0,00E+00	2,99E-01	1,69E+01	4,81E+02	7,04E+00	-4,66E+02
PENRM	MJ	6,57E+00	0,00E+00	-2,19E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-4,38E+00	0,00E+00
PENRT	MJ	2,16E+03	4,22E+01	3,33E+00	0,00E+00	2,99E-01	1,69E+01	4,81E+02	2,66E+00	-4,66E+02
SM	kg	3,96E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-9,26E+00
RSF	MJ	0,00E+00	0,00E+00	0,00E+00	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	0,00E+00	0,00E+00	0,00E+00
FW	m^3	5,47E+00	3,84E-03	2,04E-03	0,00E+00	2,09E-05	1,54E-03	8,20E-01	-2,42E-02	-1,24E+00
Acronyms	**PERE**: Use of renewable primary energy excluding renewable primary energy resources used as raw materials; **PERM**: Use of renewable primary energy resources used as raw materials; **PERT**: Total use of renewable primary energy resources; **PENRE**: Use of non-renewable primary energy excluding non-renewable primary 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 re-sources; **SM**: Use of secondary material; **RSF**: Use of renewable secondary fuels; **NRSF**: Use of non-renewable secondary fuels; **FW**: Use of net fresh water									

Additional mandatory and voluntary impact category indicators

Results per declared unit: One planter										
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1-B7**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-GHG	kg CO2 eq	1,44E+02	2,17E+00	3,11E-01	0,00E+00	2,27E-02	8,69E-01	4,03E+01	4,24E-01	-3,02E+01
PM	Disease incidence	3,24E-05	1,41E-07	1,75E-08	0,00E+00	5,80E-09	5,63E-08	2,75E-06	1,34E-08	-7,40E-06
IRP[2]	kBq U235 eq.	1,12E+02	3,67E-02	8,87E-03	0,00E+00	1,26E-04	1,47E-02	3,26E+00	1,65E-02	-2,60E+01
ETP-fw[1]	CTUe	9,33E+02	4,04E+00	1,67E+00	0,00E+00	1,60E-02	1,62E+00	5,25E+02	3,71E+02	-2,00E+02
HTP-c[1]	CTUh	8,54E-07	3,91E-10	2,29E-10	0,00E+00	2,32E-12	1,57E-10	5,16E-08	1,76E-10	-1,99E-07
HTP-nc[1]	CTUh	5,47E-06	1,67E-08	1,10E-08	0,00E+00	3,66E-11	6,69E-09	4,49E-06	6,00E-09	-1,20E-06
SQP[1]	Dimensionless	1,39E+03	1,82E+01	1,32E+00	0,00E+00	1,96E-02	7,28E+00	3,90E+02	3,67E+00	-1,16E+02
Acronyms	**GWP-GHG**: global warming potential - greenhouse gases; **PM**: particulate matter; **IRP**: ionizing radiation potential; **ETP-fw**: ecotoxicity potential - freshwater; **HTP-c**: human toxicity potential - cancer; **HTP-nc**: human toxicity potential - non-cancer; **SQP**: smog formation potential									

The GWP-GHG indicator is identical to GWP-total except that the characterisation factor (CF) for biogenic CO2 is set to zero. This means that the uptake and emissions of biogenic CO2 are "balanced out already in modules A1 and A3, instead of in modules A5 (for packaging) or modules C3 and/or C4 (for the product). The results over the entire product life cycle, from module A to C, are thus identical for GWP-GHG and GWP-total unless some of the uptake of biogenic CO2 is released as another greenhouse gas (e.g., CH4). In the context of Norwegian public procurement legislation, GWP-GHG is also referred to as GWP-IOBC.

[1] *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.*

[2] *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.*

Waste indicators

Results per declared unit: One planter										
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1-B7**	**C1**	**C2**	**C3**	**C4**	**D**
HWD	kg	1,01E+02	3,11E-02	5,02E-02	0,00E+00	2,62E-04	1,24E-02	2,90E+00	3,64E-02	-2,35E+01
NHWD	kg	7,78E+01	3,34E-01	1,89E-02	0,00E+00	1,94E-03	1,34E-01	0,00E+00	5,93E+00	-1,70E+01
RWD	kg	2,90E-02	0,00E+00	1,73E-06	0,00E+00	3,10E-08	0,00E+00	8,24E-04	3,83E-06	-6,89E-03
Acronyms	**HWD**: Hazardous waste disposed; **NHWD**: Non-hazardous waste disposed; **RWD**: Radioactive waste disposed									

Output flow indicators

Results per declared unit: One planter										
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1-B7**	**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	0,00E+00	0,00E+00	0,00E+00
MFR	kg	0,00E+00	0,00E+00	2,73E-02	0,00E+00	0,00E+00	0,00E+00	5,09E+01	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	0,00E+00	0,00E+00	0,00E+00
EEE	MJ	0,00E+00	0,00E+00	8,63E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,13E-01	0,00E+00
EET	MJ	0,00E+00	0,00E+00	1,74E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,32E-01	0,00E+00
Acronyms	**CRU**: Components for reuse; **MFR**: Materials for recycling; **MER**: Materials for energy recovery; **EEE**: Exported electric energy; **EET**: Exported thermal energy									

Information on biogenic carbon content

Parameter	Unit	Value
Biogenic carbon content in product	kg C	4,67E-03
Biogenic carbon content in the accompanying packaging	kg C	1,90E+00

Note: 1 kg biogenic carbon is equivalent to 44/12 kg of CO2

Environmental impact performance from 100% scenarios

Potential environmental impact – indicators according to EN 15804+A2

Results per declared unit: One planter													
Indicator	**Unit**	**C2 100% RC**	**C2 100% INC**	**C2 100% LF**	**C3 100% RC**	**C3 100% INC**	**C3 100% LF**	**C4 100% RC**	**C4 100% INC**	**C4 100% LF**	**D 100% RC**	**D 100% INC**	**D 100% LF**
GWP-total	kg CO2 eq	8,68E-01	1,41E+00	8,68E-01	4,48E+01	0,00E+00	0,00E+00	0,00E+00	1,43E+00	1,23E+00	-3,51E+01	-1,19E-01	0,00E+00
GWP-fossil	kg CO2 eq	8,67E-01	1,41E+00	8,67E-01	4,44E+01	0,00E+00	0,00E+00	0,00E+00	1,41E+00	1,04E+00	-3,38E+01	-1,19E-01	0,00E+00
GWP-biogenic	kg CO2 eq	1,83E-04	2,97E-04	1,83E-04	3,78E-01	0,00E+00	0,00E+00	0,00E+00	1,83E-02	1,93E-01	-5,05E-01	-6,48E-05	0,00E+00
GWP-luluc	kg CO2 eq	2,87E-04	4,67E-04	2,87E-04	4,66E-02	0,00E+00	0,00E+00	0,00E+00	5,12E-04	2,87E-04	-7,62E-01	-8,99E-05	0,00E+00
ODP	kg CFC-11 eq	1,89E-08	3,07E-08	1,89E-08	7,08E-07	0,00E+00	0,00E+00	0,00E+00	2,24E-08	2,49E-08	-6,05E-07	-1,46E-09	0,00E+00
AP	mole H+ eq	2,78E-03	4,53E-03	2,78E-03	5,86E-01	0,00E+00	0,00E+00	0,00E+00	6,02E-03	5,27E-03	-2,12E-01	-7,50E-04	0,00E+00
EP-freshwater	kg P eq	5,92E-05	9,62E-05	5,92E-05	4,48E-02	0,00E+00	0,00E+00	0,00E+00	8,00E-04	1,49E-04	-1,86E-02	-4,25E-05	0,00E+00
EP-marine	kg N eq	9,44E-04	1,53E-03	9,44E-04	5,09E-02	0,00E+00	0,00E+00	0,00E+00	2,45E-03	3,57E-03	-3,02E-02	-1,09E-04	0,00E+00
EP-terrestrial	mole N eq	1,02E-02	1,66E-02	1,02E-02	6,11E-01	0,00E+00	0,00E+00	0,00E+00	2,51E-02	2,27E-02	-2,78E-01	-1,13E-03	0,00E+00
POCP	kg NMVOC eq	4,22E-03	6,86E-03	4,22E-03	1,90E-01	0,00E+00	0,00E+00	0,00E+00	8,50E-03	7,78E-03	-1,21E-01	-3,51E-04	0,00E+00
ADP-minerals & metals[1]	kg Sb eq	2,93E-06	4,75E-06	2,93E-06	5,99E-03	0,00E+00	0,00E+00	0,00E+00	3,38E-06	2,81E-06	-7,97E-05	-1,58E-07	0,00E+00
ADP-fossil[1]	MJ	1,23E+01	2,00E+01	1,23E+01	5,35E+02	0,00E+00	0,00E+00	0,00E+00	1,75E+01	2,02E+01	-5,42E+02	-2,45E+00	0,00E+00
WDP[1]	m3	6,60E-02	1,07E-01	6,60E-02	1,34E+01	0,00E+00	0,00E+00	0,00E+00	5,20E-01	1,10E+00	-6,37E+01	-2,08E-02	0,00E+00
Acronyms	**GWP-total**: Total Global Warming Potential; **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 Exceedance; **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 Exceedance; **POCP**: Formation potential of tropospheric ozone; **ADP-minerals&metals**: Abiotic depletion potential for non-fossil resources; **ADP-fossil**: Abiotic depletion for fossil resources potential; **WDP**: Water (user) deprivation potential, deprivation-weighted water consumption; **RC**: Recycling; **INC**: Incineration; **LF**: Landfill												

[1] 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.

Use of resources 100% scenarios

Results per declared unit: One planter													
Indicator	**Unit**	**C2 100% RC**	**C2 100% INC**	**C2 100% LF**	**C3 100% RC**	**C3 100% INC**	**C3 100% LF**	**C4 100% RC**	**C4 100% INC**	**C4 100% LF**	**D 100% RC**	**D 100% INC**	**D 100% LF**
PERE	MJ	4,76E+00	7,74E+00	4,76E+00	8,18E+01	0,00E+00	0,00E+00	0,00E+00	6,14E-01	2,20E+00	-2,10E+02	-2,75E-01	0,00E+00
PERM	MJ	0,00E+00	0,00E+00	0,00E+00	-2,51E-01	0,00E+00	0,00E+00	0,00E+00	-2,51E-01	-2,51E-01	-2,26E-01	0,00E+00	0,00E+00
PERT	MJ	4,76E+00	7,74E+00	4,76E+00	8,16E+01	0,00E+00	0,00E+00	0,00E+00	3,63E-01	1,95E+00	-2,10E+02	-2,75E-01	0,00E+00
PENRE	MJ	1,69E+01	2,75E+01	1,69E+01	5,39E+02	0,00E+00	0,00E+00	0,00E+00	2,19E+01	2,45E+01	-5,38E+02	-2,45E+00	0,00E+00
PENRM	MJ	0,00E+00	0,00E+00	0,00E+00	-4,38E+00	0,00E+00	0,00E+00	0,00E+00	-4,38E+00	-4,38E+00	-3,95E+00	0,00E+00	0,00E+00
PENRT	MJ	1,69E+01	2,75E+01	1,69E+01	5,35E+02	0,00E+00	0,00E+00	0,00E+00	1,75E+01	2,02E+01	-5,42E+02	-2,45E+00	0,00E+00
SM	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-1,03E+01	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	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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	m3	1,54E-03	2,50E-03	1,54E-03	9,11E-01	0,00E+00	0,00E+00	0,00E+00	1,17E-02	-2,44E-01	-1,39E+00	-5,09E-04	0,00E+00
Acronyms	**PERE**: Use of renewable primary energy excluding renewable primary energy resources used as raw materials; **PERM**: Use of renewable primary energy resources used as raw materials; **PERT**: Total use of renewable primary energy resources; **PENRE**: Use of non-renewable primary energy excluding non-renewable primary 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 re-sources; **SM**: Use of secondary material; **RSF**: Use of renewable secondary fuels; **NRSF**: Use of non-renewable secondary fuels; **FW**: Use of net fresh water; **LF**: Landfill; **RC**: Recycling; **INC**: Incineration												

Additional voluntary indicators 100% scenarios

Results per declared unit: One planter													
Indicator	**Unit**	**C2 100% RC**	**C2 100% INC**	**C2 100% LF**	**C3 100% RC**	**C3 100% INC**	**C3 100% LF**	**C4 100% RC**	**C4 100% INC**	**C4 100% LF**	**D 100% RC**	**D 100% INC**	**D 100% LF**
GWP-GHG	kg CO2 eq	8,68E-01	1,41E+00	8,68E-01	4,48E+01	0,00E+00	0,00E+00	0,00E+00	1,41E+00	1,21E+00	-3,47E+01	-1,19E-01	0,00E+00
PM	Disease incidence	5,62E-08	9,14E-08	5,62E-08	3,05E-06	0,00E+00	0,00E+00	0,00E+00	1,89E-07	1,13E-07	-8,27E-06	-7,96E-09	0,00E+00
IRP[2]	kBq U235 eq.	1,47E-02	2,39E-02	1,47E-02	3,62E+00	0,00E+00	0,00E+00	0,00E+00	2,25E-02	1,28E-01	-2,89E+01	-6,76E-02	0,00E+00
ETP-fw[1]	CTUe	1,62E+00	2,63E+00	1,62E+00	5,83E+02	0,00E+00	0,00E+00	0,00E+00	1,75E+01	3,66E+03	-2,50E+02	-1,65E-01	0,00E+00
HTP-c[1]	CTUh	1,56E-10	2,54E-10	1,56E-10	5,73E-08	0,00E+00	0,00E+00	0,00E+00	1,34E-09	3,74E-10	-2,21E-07	-1,97E-11	0,00E+00
HTP-nc[1]	CTUh	6,68E-09	1,09E-08	6,68E-09	4,99E-06	0,00E+00	0,00E+00	0,00E+00	9,69E-09	4,57E-08	-1,48E-06	-7,37E-10	0,00E+00
SQP[1]	Dimensionless	7,27E+00	1,18E+01	7,27E+00	4,34E+02	0,00E+00	0,00E+00	0,00E+00	1,91E+01	3,44E+01	-1,52E+02	-7,20E-01	0,00E+00
Acronyms	**GWP-GHG**: global warming potential - greenhouse gases; **PM**: particulate matter; **IRP**: ionizing radiation potential; **ETP-fw**: ecotoxicity potential - freshwater; **HTP-c**: human toxicity potential - cancer; **HTP-nc**: human toxicity potential - non-cancer; **SQP**: smog formation potential; **LF**: Landfill; **RC**: Recycling; **INC**: Incineration												

The GWP-GHG indicator is identical to GWP-total except that the characterisation factor (CF) for biogenic CO2 is set to zero. This means that the uptake and emissions of biogenic CO2 are "balanced out already in modules A1 and A3, instead of in modules A5 (for packaging) or modules C3 and/or C4 (for the product). The results over the entire product life cycle, from module A to C, are thus identical for GWP-GHG and GWP-total unless some of the uptake of biogenic CO2 is released as another greenhouse gas (e.g., CH4). In the context of Norwegian public procurement legislation, GWP-GHG is also referred to as GWP-IOBC.

[1] *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.*

[2] *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.*

Waste indicators 100% scenarios

Results per declared unit: One planter													
Indicator	**Unit**	**C2 100% RC**	**C2 100% INC**	**C2 100% LF**	**C3 100% RC**	**C3 100% INC**	**C3 100% LF**	**C4 100% RC**	**C4 100% INC**	**C4 100% LF**	**D 100% RC**	**D 100% INC**	**D 100% LF**
HWD	kg	1,24E-02	2,02E-02	1,24E-02	3,23E+00	0,00E+00	0,00E+00	0,00E+00	7,27E-02	2,82E-01	-2,62E+01	-2,60E-03	0,00E+00
NHWD	kg	1,34E-01	2,17E-01	1,34E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,67E+01	-1,92E+01	-1,04E-02	0,00E+00
RWD	kg	0,00E+00	0,00E+00	0,00E+00	9,16E-04	0,00E+00	0,00E+00	0,00E+00	5,63E-06	2,88E-05	-7,67E-03	-1,63E-05	0,00E+00
Acronyms	**HWD**: Hazardous waste disposed; **NHWD**: Non-hazardous waste disposed; **RWD**: Radioactive waste disposed; **LF**: Landfill; **RC**: Recycling; **INC**: Incineration												

Output flow indicators 100% scenarios

Results per declared unit: One planter													
Indicator	**Unit**	**C2 100% RC**	**C2 100% INC**	**C2 100% LF**	**C3 100% RC**	**C3 100% INC**	**C3 100% LF**	**C4 100% RC**	**C4 100% INC**	**C4 100% LF**	**D 100% RC**	**D 100% INC**	**D 100% LF**
CRU	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	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	5,70E+01	0,00E+00	0,00E+00	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	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	0,00E+00	6,03E-01	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	0,00E+00	1,25E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Acronyms	**CRU**: Components for reuse; **MFR**: Materials for recycling; **MER**: Materials for energy recovery; **EEE**: Exported electric energy; **EET**: Exported thermal energy; **LF**: Landfill; **RC**: Recycling; **INC**: Incineration												

Impact Indicators Variation

LCA result of one declared unit product (A-C)	Unit	Min	Max
GWP-total	kg CO2 eq.	-165%	+86%
GWP-fossil	kg CO2 eq.	-165%	+86%
GWP-GHG	kg CO2 eq.	-165%	+86%
GWP-biogenic	kg CO2 eq.	-167%	+79%
GWP-luluc	kg CO2 eq.	-165%	+79%
ODP	kg CFC-11 eq.	-166%	+81%
AP	Mole of H+ eq.	-165%	+83%
EP-freshwater	kg P eq.	-165%	+85%
EP-marine	kg N eq.	-166%	+86%
EP-terrestial	Mole of N eq.	-165%	+86%
POCP	kg NMVOC eq.	-165%	+85%
ADP-M&M	kg Sb eq.	-165%	+80%
ADP-fossil	MJ	-165%	+84%
WDP	m^3 world equiv.	-165%	+81%

Additional environmental information - Conversion factors A1-A3 GWP-GHG

Product Name	Conversion factors
Växtkärl Stor Blom / g:svart	2,52
Växtkärl / Kolonn no.1 / g:natur	0,89
Växtkärl Vid Blom / g:natur	1,31
Växtkärl Gråsippa no.2 / g:natur	0,20
Växtkärl Sofiero / g:svart	1,52
Växtkärl Hexagon no.3 / g:natur	1,16
Växtkärl Låg Blom / g:natur	0,90
Växtkärl Gråsippa no.3 / g:natur	0,63
Växtkärl Vid Blom / g:svart	1,32
Växtkärl Hexagon no.1 / g:natur	0,71
Växtkärl / Kolonn no.5 / g:svart	2,04
Växtkärl / Kolonn no.1 / g:svart	0,89
Växtkärl Stor Relief / g:svart	1,45
Växtkärl Relief / g:natur	0,34
Växtkärl Näver no.3 / g:natur	0,98
Växtkärl Gråsippa no.2 / g:svart	0,20
Växtkärl / Kolonn no.5 / g:natur	2,04
Växtkärl Blom / g:svart	1,00
Växtkärl Hexagon no.2 / g:svart	1,33
Växtkärl Små Blom / g:svart	0,47
Växtkärl / Kolonn no.4 / g:natur	1,34
Växtkärl Cross / g:natur	0,87
Växtkärl Näver no.1 / g:svart	0,49
Växtkärl / Kolonn no.4 / g:svart	1,35
Växtkärl Gråsippa no.1 / g:svart	0,09
Växtkärl Karl XL / emblem:nej / g:natur	0,85
Växtkärl Blom / g:natur	1,00
Växtkärl Karl / g:natur	0,80
Växtkärl Gråsippa no.1 / g:natur	0,09
Växtkärl / Kolonn no.2 / g:natur	1,09

Additional environmental information - Conversion factors A1-A3 GWP-GHG

Product Name	Conversion factors
Växtkärl Karl XL / emblem:nej / g:svart	0,85
Växtkärl Näver no.1 / g:natur	0,49
Växtkärl Stor Blom / g:natur	2,56
Växtkärl Hexagon no.1 / g:svart	0,72
Växtkärl Karl / g:svart	0,80
Växtkärl Hexagon no.3 / g:svart	1,16
Växtkärl Sofiero / g:natur	1,52
Växtkärl Näver no.2 / g:svart	0,72
Växtkärl Cross / g:svart	0,87
Växtkärl Låg Blom / g:svart	0,90
Växtkärl / Kolonn no.3 / g:natur	1,60
Växtkärl Relief / g:svart	0,34
Växtkärl Små Blom / g:natur	0,47
Växtkärl / Kolonn no.3 / g:svart	1,60
Växtkärl Gråsippa no.3 / g:svart	0,63
Växtkärl Stor Relief / g:natur	1,45
Växtkärl Näver no.3 / g:svart	0,99
Växtkärl Hexagon no.2 / g:natur	1,32
Växtkärl / Kolonn no.2 / g:svart	1,09
Växtkärl Näver no.2 / g:natur	0,72

Abbreviations

General Abbreviations

EN	European Norm (Standard)
EF	Environmental Footprint
ISO	International Organization for Standardization
PCR	Product Category Rules
CEN	European Committee for Standardization
CPC	Central Product Classification
GRI	Global Reporting Initiative
EPD	Environmental Product Declaration
GPI	General Programme Instructions
LCA	Life Cycle Assessment
c-PCR	Complementary Product Category Rules
CLC	Co-location centre
GHS	Globally harmonized system of classification and labelling of chemicals

Environmental Impact Indicators (EN 15804)

GWP-GHG	Greenhouse gas
GWP-fossil	Global Warming Potential fossil fuels
GWP-luluc	Global Warming Potential land use and land use change
GWP-GHG	Global Warming Potential for greenhouse gases
AP	Acidification potential, Accumulated Exceedance
EP-freshwater	Eutrophication potential, fraction of nutrients reaching freshwater end compartment
EP-terrestrial	Eutrophication potential, Accumulated Exceedance
ADP	Abiotic Depletion Potential
ADP-fossil	Abiotic depletion for fossil resources potential
GWP	Global Warming Potential
GWP-biogenic	Global Warming Potential biogenic
GWP-total	Total Global Warming Potential
ODP	Depletion potential of the stratospheric ozone layer
EP	Eutrophication Potential
EP-marine	Eutrophication potential, fraction of nutrients reaching freshwater end compartment
POCP	Formation potential of tropospheric ozone
ADP-minerals&metals	Abiotic depletion potential for non-fossil resources
WDP	Water (user) deprivation potential, deprivation-weighted water consumption

Resource Use Indicators

PERE	Use of renewable primary energy excluding renewable primary energy resources used as raw materials (MJ)
PERT	Total use of renewable primary energy resources (MJ)
PENRM	Use of non-renewable primary energy resources used as raw materials (MJ)
SM	Use of secondary material (kg)
NRSF	Use of non-renewable secondary fuels (MJ)
PERM	Use of renewable primary energy resources used as raw materials (MJ)
PENRE	Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials (MJ)
PENRT	Total use of non-renewable primary energy resources (MJ)
RSF	Use of renewable secondary fuels (MJ)
FW	Use of net fresh water (m^3)

Abbreviations continued

Waste Indicators

HWD Hazardous Waste (disposed) (kg)

NHWD Non-Hazardous Waste (disposed) (kg)

RWD Radioactive Waste (disposed) (kg)

Output Flow Indicators

CRU Components for Reuse (kg)

MFR Material for Recycling (kg)

MER Materials for Energy Recovery (kg)

EEE Exported Energy, Electricity (MJ)

EET Exported Energy, Thermal (MJ)

Lifecycle Stages / Modules

A1 Raw material supply

A2 Transport

A3 Manufacturing

A4 Transport to site

A5 Construction/Installation

B1 Use

B2 Maintenance

B3 Repair

B4 Replacement

B5 Refurbishment

B6 Operational energy use

B7 Operational water use

C1 Deconstruction/Demolition

C2 Transport to waste processing

C3 Waste processing

C4 Disposal

D Reuse-Recovery-Recycling potential

Other Relevant Terms

SVHC	Substances of Very High Concern	EC No.	European Community Number
CAS No.	Chemical Abstracts Service Number	MJ	Megajoule
kg	Kilogram	m^3	Cubic Meter
NMVOC	Non-Methane Volatile Organic Compounds	Sb eq.	Antimony Equivalents
RC	Recycling	LF	Landfill
P eq.	Phosphorus Equivalents	N eq.	Nitrogen Equivalents
CFC-11 eq.	Chlorofluorocarbon-11 Equivalents	CO2 eq.	Carbon Dioxide Equivalents
kg C	Kilograms of Carbon	kg CO2 eq.	Kilograms of Carbon Dioxide Equivalent
ND	Not Declared	INC	Incineration
MND	Module not declared		

References

- EN 15804:2012+A2:2019/AC:2021
  Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products
- EPD International (2024)
  General Programme Instructions of the International EPD System, version 5.0.1
- ISO 14020:2022
  International Standard ISO 14020 – Environmental statements and programmes for products – Principles and general requirements
- ISO 14025:2006
  International Standard ISO 14025 – Environmental labels and declarations — Type III environmental declarations — Principles and procedures
- ISO 14040:2006
  International Standard ISO 14040: Environmental Management – Life cycle assessment – Principles and framework. Second edition 2006-07-01.
- ISO 14044:2006
  International Standard ISO 14044: Environmental Management – Life cycle assessment – Requirements and Guidelines.
- PCR2019:14, version 2.0.1 Construction products
- c-PCR-021, version 2.0.1 Furniture and components of furniture.
  Please find the reference of the calulation of ALU (RFI Post and Pre consumer) in a separate appendix.

Version history

Version 1
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EPD-IES-0034015:001

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