Product Environmental Profile



Green Motion Duo

Representative product	Green Motion Duo Master 2xT2S MCB 40 A, 6 kA + RCCB Type A 30mA 4G ISO15118 + POS (GMM2222BBCH00C03) Product Category: Electric Vehicle Charging Infrastructure (EVCI)
Description of the product	The Green Motion Duo is a versatile dual socket AC electric vehicle charger designed for multi-family homes, office buildings, and public sites. It allows simultaneous charging of two vehicles with up to 22 kW per charging point, ensuring efficient energy use through advanced dynamic load balancing capabilities. The charger can be wall-mounted or floor-mounted, providing installation flexibility. Safety is enhanced with integrated MCB and RCCB. It is hardware-ready for V2X applications and supports ISO15118-2 Plug & Charge for seamless user authentication. The Green Motion Duo offers flexible connectivity options, compatible with third-party systems like EMS and CSMS. The installation process is simple and cost-effective, featuring a two-door system for easy access. The built-in payment terminal allows for revenue generation while providing a convenient user experience.
Product Specifications	Product family: Active product Station type: Wallbox running on alternating current (AC)

Installation type	Wall installation: garages, roofed sheds or exterior parking areas in collective residential buildings or buildings used as offices, car parks
Charging type	Normal
Number of charging points	2 type 2S sockets
Charging mode	Mode 3
Presence of connected sockets	NA
Reference power	32 A - 230 V - 22 kW - three-phase
Current type	AC
Reference service life (RSL)	10 yrs (as per PSR)

This is a charging station for a private or semi-public environment for one or more users and runs on alternating current. This is a charging wallbox installed (for example) in garages, roofed sheds, car parks and outside parking spaces associated with a residential or tertiary use building.
It is always composed of:

- 1 or 2 type 2S sockets connected to a rated current of 32 A
- 1 or 2 controllers
- 1 housing.

It includes:

- 1 electrical protection device
- 1 access control system (RFID or key)
- 1 modem
- 1 OCPP to CPO communication module
- 1 TIC remote data module

The elements used for connecting the station to the mains grid and to the monitoring and communication network are excluded.

Homogenous Environmental family covered

Product Family	Product Number	Weight (kg)	Classification
Green Motion Duo	Green Motion Duo (Reference) GMM2222BBCH00C03	13.53 (Maximum)	Green Motion Duo Master 2xT2S MCB 40 A, 6 kA + RCCB Type A 30mA 4G ISO15118
	Green Motion Duo (Homogenous 1) GMM2222BBCG00C03	13.17	Green Motion Duo Master 2xT2S MCB 40 A, 6 kA + RCCB Type A 30mA 4G ISO15118 + POS
	Green Motion Duo (Homogenous 2) GMM2222BACG00C04	13.03	Green Motion Duo Node 2xT2S MCB 40 A, 6 kA + RCCB Type A 30mA ISO15118
	Green Motion Duo (Homogenous 3) GMM2222BBBH00C03	12.46 (Median)	Green Motion Duo Master 2xT2S RCCB Type A 30mA 4G ISO15118 + POS
	Green Motion Duo (Homogenous 4) GMM2222BBBG00C03	12.1	Green Motion Duo Master 2xT2S RCCB Type A 30mA 4G ISO15118
	Green Motion Duo (Homogenous 5) GMM2222BABG00C04	11.96 (Minimum)	Green Motion Duo Node 2xT2S RCCB Type A 30mA ISO15118

Functional unit

Supply 1 kWh to one vehicle in accordance with the reference use scenario at the charging point

Declared unit	To ensure the recharging of electric vehicles or rechargeable hybrids through one or two recharging points during a reference lifetime of 10 years
Company information	Eaton Industries Manufacturing GmbH Place de la Gare 2 1345 Le Lieu, Switzerland Email: productstewardship-es@eaton.com

Constituent Materials			
Reference product mass	**1.59E+01Kg**		
Category PEP Material	**Materials**	**Mass (kg)**	**Percentage (%)**
Plastics	Polycarbonate	4.84E+00	30.4%
Metals	Steel	2.80E+00	17.6%
Others	Cardboard	2.55E+00	16.1%
Plastics	Polyamide	2.00E+00	12.6%
Others	Cable	1.36E+00	8.6%
Others	Connector	4.71E-01	3.0%
Others	Paper	4.54E-01	2.9%
Metals	Copper	2.92E-01	1.8%
Others	Printed Wire Board (PWB)	2.63E-01	1.7%
Others	External power supply (EPS)	1.95E-01	1.2%
Others	Fan	6.90E-02	0.4%
Others	Capacitor	6.66E-02	0.4%
Plastics	Polyethylene	5.79E-02	0.4%
Others	Integrated Circuit (IC)	5.58E-02	0.4%
Others	RJ45	4.34E-02	0.3%
Others	Miscellaneous	3.95E-01	2.5%
Total		1.59E+01	100.0%

Substance Assessment

The representative product is compliant with the EU-RoHS Directive (2011/65/EU) by application of exemptions and the product contains Lead in Miniature circuit breaker, Connector, Circuit breaker, Shunt Release; 1,2-dimethoxyethane in Electrolyte (Li-ion battery), which is listed as Substance-of-Very-High-Concern (SVHC) on the Candidate List of the EU-REACH Regulation (1907/2006/EC).

Additional Environmental Information	
Manufacturing	The reference product is assembled at an Eaton plant holding management system certifications according to ISO 14001 standards.
Distribution	Eaton is committed to minimizing weight and volume of product and its associated packaging material with focus to optimize transport efficiency.
Installation	During installation of the product only standard tools are needed. During installation the energy required screwing/ hardware fittings is excluded as per PCR requirement.
Use	Product consumes energy during useful life which is 10 years (as per real scenario).

	As per PSR 18, a site visit and travel by an engineer is included for preventive maintenance, 200km by car.
End of life	Recyclability of product is equal to 23.93% based on the method described in IEC/TR 62635, Edition 1.0/2012-10 "Guidelines for end-of-life information provided by manufacturers and recyclers and for recyclability rate calculation of electrical and electronic equipment".

Environmental Impacts	
The calculation of the environmental impacts is the result of the Product's Life Cycle Analysis in accordance with ISO 14040/44, covering the entire lifecycle, i.e. "Cradle-to-Grave" including the following life cycle phases: production, distribution, installation, use and end of life. System modelling was carried out using the commercial LCA software EIME v6.3.0 with database version CODDE-2024-04 updated on 2024-06-04. Indicators Set used: PEF EF 3.1 (Compliance: PEP ed.4, EN15804+A2) v2.0	
Manufacturing Phase	Product is assembled and prepared for shipment at the Eaton Industries Manufacturing GmbH, Switzerland. Assembly energy is 7.173kWh. Energy model used: Europe
Distribution Phase	Since the manufacturing location is Arad, Romania, Europe, and the distribution center is Raeinbach (PMCC distribution center), Germany, 1400 km by road is considered. Energy model used: Europe.
Installation Phase	Product is installed in Europe. There is no energy consumption for reference product. Energy model used: Europe
Use Phase	Use phase calculation for reference product is as follows: Terminal reference power: 22kW Current type: three phase Reference service life: 10 years Number of charges: 2 per week Terminal consumption associated with losses/Power dissipated for the declared unit (product): 1,070.06 kWh Resistance of closed contacts (R): 0.068 Ohm (As per PSR, this is Resistance of the connections that transmit the current to the vehicle, thus the total resistance is considered here.) Intrinsic consumption of the station: 2580.84 kWh Operating power (socket connected and charging) Pactive: 0.036 kW Power on active standby (socket connected and charging complete) Pva: 0.03 kW Socket power on passive standby (socket not connected) Pvp: 0.029 kW Power off (socket not connected) Poff: 0.029 kW Conversion factors between declared unit and functional unit: 5.65E+04 Total life cycle consumption for the product: 3.65E+03kWh Total life cycle consumption for the functional unit: 6.46E-02kWh As per PSR 18, there is no mandatory/regulatory maintenance scheme for electric vehicle charging infrastructures. However, preventive maintenance programmes is carried out for this product. In most cases, these programmes involve visual checks, which involve a site visit and travel by an engineer. Thus, car travel for 1 person for 200km is considered for maintenance check. Energy model used: Europe

End of life Phase	Product disposed according to European WEEE guidelines. Energy model used: Europe
Module-D	Module D is calculated according to PCR-ed4-EN-2021 09 06 based on the materials recycled and the modelled end-of-life scenario. It expresses the net benefits and loads beyond the boundaries of the system and are not to be included in the life cycle totals.

All environmental impacts are calculated for the declared unit, then data should be divided by the Factor calculated with below formulas to get functional unit result.

Environmental impact of the FU = Environmental impact of the reference product (declared unit) / Quantity of energy supplied to one or more vehicles by the station over its RL

Environmental impact of the FU = Environmental impact of the reference product (declared unit) / 28251 (kWh) * 2 charging points

Environmental impact of the FU = Environmental impact of the reference product (declared unit) / 56502

Environmental Impact considering for Functional Unit

Environmental Impact Indicators: Mandatory

Mandatory environmental impact indicators	Units	Sum	A1-A3 - Manufacturing	A4 - Distribution	A5 - Installation	B1-B7 - Use	C1-C4 - End of life	B2 - Maintenance	B6 - Operational energy use	D - Benefits and loads beyond the system boundaries
Climate change - total	kg CO2 eq.	1.65E-02	2.62E-03	3.68E-05	1.47E-04	1.33E-02	3.99E-04	3.61E-04	1.29E-02	-1.85E-04
Climate change - fossil fuels	kg CO2 eq.	1.64E-02	2.66E-03	3.68E-05	6.42E-05	1.33E-02	3.96E-04	3.61E-04	1.29E-02	-2.50E-04
Climate change - biogenics	kg CO2 eq.	6.89E-05	-4.12E-05	1.51E-10	8.33E-05	2.41E-05	2.70E-06	3.58E-07	2.38E-05	6.52E-05
Climate change - land use and land use transformation	kg CO2 eq.	1.53E-07	1.51E-07	5.57E-11	0.00E+00	2.32E-09	1.98E-11	2.32E-09	0.00E+00	0.00E+00
Ozone depletion	kg eq. CFC-11	1.85E-09	1.73E-09	4.46E-13	2.52E-12	9.72E-11	1.18E-11	3.46E-11	6.26E-11	-1.41E-11
Acidification (AP)	mole of H+ eq.	8.54E-05	1.54E-05	5.81E-08	2.50E-07	6.86E-05	1.01E-06	2.48E-06	6.62E-05	-1.42E-06
Freshwater eutrophication	kg P eq.	8.58E-08	2.75E-08	1.38E-10	7.51E-10	3.55E-08	2.19E-08	1.46E-09	3.40E-08	-9.73E-10
Marine aquatic eutrophication	kg of N eq.	1.05E-05	1.75E-06	1.05E-08	9.44E-08	8.31E-06	3.39E-07	2.55E-07	8.06E-06	-1.83E-07
Terrestrial eutrophication	mole of N eq.	1.54E-04	1.85E-05	1.16E-07	7.33E-07	1.33E-04	2.07E-06	3.43E-06	1.29E-04	-1.80E-06
Photochemical ozone formation	kg of NMVOC eq.	3.36E-05	6.42E-06	3.74E-08	1.79E-07	2.63E-05	6.19E-07	9.62E-07	2.54E-05	-6.27E-07
Depletion of abiotic resources - elements	kg eq. Sb	6.33E-07	6.27E-07	1.31E-11	5.51E-12	6.26E-09	6.76E-10	1.69E-09	4.57E-09	-1.03E-07
Depletion of abiotic resources - fossil fuels	MJ	4.10E-01	6.12E-02	6.54E-04	6.82E-04	3.38E-01	9.02E-03	1.25E-02	3.26E-01	-8.80E-03

Water scarcity	m3 of eq.. deprivation worldwide	5.92E-03	8.64E-04	1.33E-06	1.79E-05	1.09E-03	3.95E-03	1.01E-04	9.89E-04	-9.55E-05

*__Note__: B2 (Maintenance) and B6 (energy requirements during the use stage) are considered. Other sub modules in the use stage (B1, B3-B5, B7) are equal to zero. So, it is not listed in the result tables.

Inventory Flow Indicators: Mandatory

Inventory flow indicators	Units	Sum	A1-A3 - Manufacturing	A4 - Distribution	A5 - Installation	B6 only – Use*	C1-C4 - End of life	B2 - Maintenance	B6 - Operational energy use	D - Benefits and loads beyond the system boundaries
Use of renewable primary energy, excluding renewable primary energy resources used as raw materials	MJ	1.56E-01	1.97E-03	1.74E-05	2.73E-04	1.54E-01	3.91E-05	1.36E-03	1.52E-01	2.81E-04
Use of renewable primary energy resources used as raw materials	MJ	9.53E-04	9.53E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-8.17E-04
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ	1.57E-01	2.93E-03	1.74E-05	2.73E-04	1.54E-01	3.91E-05	1.36E-03	1.52E-01	-5.37E-04
Use of non-renewable primary energy, excluding non-renewable primary energy resources used as raw materials	MJ	6.58E-01	5.57E-02	5.52E-03	6.82E-04	5.87E-01	9.02E-03	1.25E-02	5.75E-01	-8.20E-03
Use of non-renewable primary energy resources used as raw materials	MJ	5.57E-03	5.57E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-5.82E-06
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ	6.64E-01	6.12E-02	5.52E-03	6.82E-04	5.87E-01	9.02E-03	1.25E-02	5.75E-01	-8.21E-03
Use of secondary materials	kg	7.87E-08	7.87E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	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
Use of non-renewable secondary fuels	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
Net use of fresh water	m3	1.75E-04	2.02E-05	2.61E-07	6.63E-07	4.34E-05	1.11E-04	2.35E-06	4.10E-05	1.33E-03
Hazardous waste disposed of	kg	6.59E-03	5.24E-03	1.30E-06	2.43E-06	1.09E-03	2.55E-04	9.04E-05	9.98E-04	-4.96E-04
Non-hazardous waste disposed of	kg	5.47E-03	1.25E-03	2.88E-05	1.96E-05	4.02E-03	1.54E-04	1.78E-04	3.85E-03	-4.56E-05
Radioactive waste disposed of	kg	2.55E-06	1.49E-06	2.29E-08	3.53E-09	1.02E-06	1.33E-08	1.38E-07	8.83E-07	-2.56E-08
Components for re-use	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
Materials for recycling	kg	1.63E-04	7.36E-05	0.00E+00	4.62E-05	0.00E+00	4.34E-05	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	9.22E-06	2.57E-06	0.00E+00	0.00E+00	0.00E+00	6.66E-06	0.00E+00	0.00E+00	0.00E+00
Exported energy	MJ by energy vector	3.91E-07	5.97E-09	0.00E+00	2.40E-07	0.00E+00	1.44E-07	0.00E+00	0.00E+00	0.00E+00

Biogenic carbon content of the product	kg of C.	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
Biogenic carbon content of the associated packaging	kg of C.	2.28E-05	2.28E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		-1.97E-05

*__Note__: B2 (Maintenance) and B6 (energy requirements during the use stage) are considered. Other sub modules in the use stage (B1, B3-B5, B7) are equal to zero. So, it is not listed in the result tables.

Environmental Impact Indicators: Optional

Optional Environmental impact indicators	Units	Sum	A1-A3 - Manufacturing	A4 - Distribution	A5 - Installation	B6 only – Use*	C1-C4 - End of life	B2 - Maintenance	B6 - Operational energy use	D - Benefits and loads beyond the system boundaries
Emission of fine particles	incidence of diseases	6.62E-10	1.05E-10	4.99E-13	1.50E-12	5.50E-10	4.37E-12	1.76E-11	5.33E-10	-1.01E-11
Ionizing radiation, human health	kBq of U235 eq.	3.17E-02	3.69E-03	1.30E-06	7.87E-03	2.01E-02	6.96E-06	1.52E-03	1.86E-02	-8.92E-04
Ecotoxicity, fresh water	CTUe	6.02E-01	5.29E-01	1.07E-03	7.91E-04	6.99E-02	1.13E-03	4.55E-02	2.44E-02	-1.57E-03
Human toxicity, cancer effects	CTUh	7.38E-07	7.38E-07	7.21E-15	5.76E-12	4.38E-12	5.05E-13	2.75E-12	1.62E-12	-2.22E-11
Human toxicity, non-cancer effects	CTUh	1.24E-10	7.42E-11	1.38E-13	1.73E-13	4.50E-11	4.69E-12	6.20E-12	3.88E-11	-1.01E-11
Impacts related to land use/soil quality	-	9.72E-04	5.04E-04	1.57E-07	1.48E-07	3.69E-04	9.79E-05	1.18E-05	3.57E-04	-6.03E-08
Total use of primary energy during the life cycle	MJ	5.01E-01	6.42E-02	6.56E-04	9.55E-04	4.26E-01	9.06E-03	1.39E-02	4.12E-01	-9.47E-03

*__Note__: B2 (Maintenance) and B6 (energy requirements during the use stage) are considered. Other sub modules in the use stage (B1, B3-B5, B7) are equal to zero. So, it is not listed in the result tables.

Environmental Impact considering for Declared Unit

Environmental Impact Indicators: Mandatory

Mandatory environmental impact indicators	Units	Sum	A1-A3 - Manufacturing	A4 - Distribution	A5 - Installation	B1-B7 - Use	C1-C4 - End of life	B2 - Maintenance	B6 - Operational energy use	D - Benefits and loads beyond the system boundaries
Climate change - total	kg CO2 eq.	9.31E+02	1.48E+02	2.08E+00	8.33E+00	7.50E+02	2.25E+01	2.04E+01	7.30E+02	-1.05E+01
Climate change - fossil fuels	kg CO2 eq.	9.27E+02	1.50E+02	2.08E+00	3.63E+00	7.49E+02	2.24E+01	2.04E+01	7.28E+02	-1.42E+01
Climate change - biogenics	kg CO2 eq.	3.89E+00	-2.33E+00	8.51E-06	4.71E+00	1.36E+00	1.53E-01	2.02E-02	1.34E+00	3.68E+00
Climate change - land use and land use transformation	kg CO2 eq.	8.64E-03	8.51E-03	3.15E-06	0.00E+00	1.31E-04	1.12E-06	1.31E-04	0.00E+00	0.00E+00
Ozone depletion	kg eq. CFC-11	1.04E-04	9.80E-05	2.52E-08	1.42E-07	5.49E-06	6.67E-07	1.96E-06	3.54E-06	-7.97E-07
Acidification (AP)	mole of H+ eq.	4.83E+00	8.72E-01	3.28E-03	1.41E-02	3.88E+00	5.73E-02	1.40E-01	3.74E+00	-8.03E-02
Freshwater eutrophication	kg P eq.	4.85E-03	1.56E-03	7.77E-06	4.24E-05	2.00E-03	1.24E-03	8.27E-05	1.92E-03	-5.50E-05

Marine aquatic eutrophication	kg of N eq.	5.94E-01	9.91E-02	5.96E-04	5.33E-03	4.70E-01	1.92E-02	1.44E-02	4.55E-01	-1.03E-02
Terrestrial eutrophication	mole of N eq.	8.72E+00	1.04E+00	6.54E-03	4.14E-02	7.51E+00	1.17E-01	1.94E-01	7.32E+00	-1.01E-01
Photochemical ozone formation	kg of NMVOC eq.	1.90E+00	3.63E-01	2.11E-03	1.01E-02	1.49E+00	3.49E-02	5.43E-02	1.43E+00	-3.54E-02
Depletion of abiotic resources - elements	kg eq. Sb	3.58E-02	3.54E-02	7.42E-07	3.11E-07	3.54E-04	3.82E-05	9.57E-05	2.58E-04	-5.79E-03
Depletion of abiotic resources - fossil fuels	MJ	2.32E+04	3.46E+03	3.69E+01	3.85E+01	1.91E+04	5.09E+02	7.06E+02	1.84E+04	-4.97E+02
Water scarcity	m3 of eq.. deprivation worldwide	3.35E+02	4.88E+01	7.49E-02	1.01E+00	6.16E+01	2.23E+02	5.71E+00	5.59E+01	-5.39E+00

***Note**: B2 (Maintenance) and B6 (energy requirements during the use stage) are considered. Other sub modules in the use stage (B1, B3-B5, B7) are equal to zero. So, it is not listed in the result tables.

Inventory Flow Indicators: Mandatory

Inventory flow indicators	Units	Sum	A1-A3 - Manufacturing	A4 - Distribution	A5 - Installation	B6 only – Use*	C1-C4 - End of life	B2 - Maintenance	B6 - Operational energy use	D - Benefits and loads beyond the system boundaries
Use of renewable primary energy, excluding renewable primary energy resources used as raw materials	MJ	5.08E+03	1.12E+02	1.16E-01	1.54E+01	4.95E+03	2.21E+00	7.69E+01	4.87E+03	8.04E+00
Use of renewable primary energy resources used as raw materials	MJ	5.38E+01	5.38E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-4.62E+01
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ	5.13E+03	1.65E+02	1.16E-01	1.54E+01	4.95E+03	2.21E+00	7.69E+01	4.87E+03	-3.81E+01
Use of non-renewable primary energy, excluding non-renewable primary energy resources used as raw materials	MJ	2.29E+04	3.15E+03	3.69E+01	3.85E+01	1.91E+04	5.09E+02	7.06E+02	1.84E+04	-4.97E+02
Use of non-renewable primary energy resources used as raw materials	MJ	3.15E+02	3.15E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-3.29E-01
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ	2.32E+04	3.46E+03	3.69E+01	3.85E+01	1.91E+04	5.09E+02	7.06E+02	1.84E+04	-4.97E+02
Use of secondary materials	kg	4.45E-03	4.45E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	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
Use of non-renewable secondary fuels	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
Net use of fresh water	m3	8.88E+00	1.14E+00	1.74E-03	3.74E-02	1.45E+00	6.26E+00	1.33E-01	1.31E+00	-1.26E-01
Hazardous waste disposed of	kg	3.48E+02	2.96E+02	8.70E-03	1.37E-01	3.71E+01	1.44E+01	5.11E+00	3.20E+01	-2.80E+01

Non-hazardous waste disposed of	kg	2.14E+02	7.04E+01	1.93E-01	1.11E+00	1.33E+02	8.68E+00	1.00E+01	1.23E+02		-2.58E+00
Radioactive waste disposed of	kg	1.21E-01	8.41E-02	1.53E-04	2.00E-04	3.61E-02	7.50E-04	7.80E-03	2.83E-02		-1.45E-03
Components for re-use	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
Materials for recycling	kg	9.22E+00	4.16E+00	0.00E+00	2.61E+00	0.00E+00	2.45E+00	0.00E+00	0.00E+00		0.00E+00
Materials for energy recovery	kg	5.21E-01	1.45E-01	0.00E+00	0.00E+00	0.00E+00	3.76E-01	0.00E+00	0.00E+00		0.00E+00
Exported energy	MJ by energy vector	2.21E-02	3.37E-04	0.00E+00	1.36E-02	0.00E+00	8.15E-03	0.00E+00	0.00E+00		0.00E+00
Biogenic carbon content of the product	kg of C.	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
Biogenic carbon content of the associated packaging	kg of C.	1.29E+00	1.29E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		-1.11E+00

*__Note__: B2 (Maintenance) and B6 (energy requirements during the use stage) are considered. Other sub modules in the use stage (B1, B3-B5, B7) are equal to zero. So, it is not listed in the result tables.

Environmental Impact Indicators: Optional

Optional Environmental impact indicators	Units	Sum	A1-A3 - Manufacturing	A4 - Distribution	A5 - Installation	B6 only – Use*	C1-C4 - End of life	B2 - Maintenance	B6 - Operational energy use	D - Benefits and loads beyond the system boundaries
Emission of fine particles	incidence of diseases	3.74E-05	5.94E-06	2.82E-08	8.47E-08	3.11E-05	2.47E-07	9.96E-07	3.01E-05	-5.71E-07
Ionizing radiation, human health	kBq of U235 eq.	1.79E+03	2.09E+02	7.36E-02	4.45E+02	1.13E+03	3.94E-01	8.56E+01	1.05E+03	-5.04E+01
Ecotoxicity, fresh water	CTUe	3.40E+04	2.99E+04	6.07E+01	4.47E+01	3.95E+03	6.37E+01	2.57E+03	1.38E+03	-8.88E+01
Human toxicity, cancer effects	CTUh	4.17E-02	4.17E-02	4.08E-10	3.26E-07	2.47E-07	2.85E-08	1.56E-07	9.17E-08	-1.26E-06
Human toxicity, non-cancer effects	CTUh	7.02E-06	4.19E-06	7.77E-09	9.78E-09	2.54E-06	2.65E-07	3.50E-07	2.19E-06	-5.73E-07
Impacts related to land use/soil quality	-	5.49E+01	2.85E+01	8.90E-03	8.34E-03	2.09E+01	5.53E+00	6.69E-01	2.02E+01	-3.41E-03
Total use of primary energy during the life cycle	MJ	2.83E+04	3.63E+03	3.70E+01	5.40E+01	2.41E+04	5.12E+02	7.83E+02	2.33E+04	-5.35E+02

*__Note__: B2 (Maintenance) and B6 (energy requirements during the use stage) are considered. Other sub modules in the use stage (B1, B3-B5, B7) are equal to zero. So, it is not listed in the result tables.

Extrapolation factors for homogenous family:

Product Number	Reference: GMM2222BBCH00C03 (Maximum)					Homo. 1: GMM2222BBCG00C03				
Phases	Manu.	Dist.	Inst.	Use	EoL	Manu.	Dist.	Inst.	Use	EoL
Climate change - total	1	1	1	1	1	0.98	0.98	1.00	0.91	0.94
Climate change - fossil fuels	1	1	1	1	1	1.03	0.98	1.00	0.91	0.96
Climate change - biogenics	1	1	1	1	1	0.98	0.98	1.00	0.91	0.94
Climate change - land use and land use transformation	1	1	1	1	1	1.00	0.98	1.00	0.91	0.85
Ozone depletion	1	1	1	1	1	1.02	0.98	1.00	0.91	0.93
Acidification (AP)	1	1	1	1	1	1.01	0.98	1.00	0.91	0.93
Freshwater eutrophication	1	1	1	1	1	0.84	0.98	1.00	0.91	0.79
Marine aquatic eutrophication	1	1	1	1	1	0.98	0.98	1.00	0.91	0.96
Terrestrial eutrophication	1	1	1	1	1	0.98	0.98	1.00	0.91	0.93
Photochemical ozone formation	1	1	1	1	1	0.99	0.98	1.00	0.91	0.92
Depletion of abiotic resources - elements	1	1	1	1	1	1.16	0.98	1.00	0.91	0.78
Depletion of abiotic resources - fossil fuels	1	1	1	1	1	0.95	0.98	1.00	0.91	0.87
Water scarcity	1	1	1	1	1	1.00	0.98	1.00	0.91	1.08

Product Number	Homo. 2: GMM2222BACG00C04					Homo. 3: GMM2222BBBH00C03 (Median)				
Phases	Manu.	Dist.	Inst.	Use	EoL	Manu.	Dist.	Inst.	Use	EoL
Climate change - total	0.97	0.97	1.00	0.83	0.93	0.94	0.93	1.00	0.98	0.87
Climate change - fossil fuels	1.04	0.97	1.00	0.83	0.95	1.06	0.93	1.00	0.98	0.90
Climate change - biogenics	0.97	0.97	1.00	0.83	0.93	0.94	0.93	1.00	0.98	0.87
Climate change - land use and land use transformation	1.00	0.97	1.00	0.83	0.80	1.00	0.93	1.00	0.98	0.65
Ozone depletion	1.02	0.97	1.00	0.83	0.90	1.03	0.93	1.00	0.98	0.82
Acidification (AP)	1.01	0.97	1.00	0.83	0.91	0.99	0.93	1.00	0.98	0.84
Freshwater eutrophication	0.79	0.97	1.00	0.83	0.72	0.63	0.93	1.00	0.98	0.52
Marine aquatic eutrophication	0.98	0.97	1.00	0.83	0.95	0.95	0.93	1.00	0.98	0.90
Terrestrial eutrophication	0.98	0.97	1.00	0.83	0.90	0.95	0.93	1.00	0.98	0.83
Photochemical ozone formation	0.99	0.97	1.00	0.83	0.89	0.96	0.93	1.00	0.98	0.81
Depletion of abiotic resources - elements	1.21	0.97	1.00	0.83	0.71	1.29	0.93	1.00	0.98	0.51
Depletion of abiotic resources - fossil fuels	0.93	0.97	1.00	0.83	0.83	0.87	0.93	1.00	0.98	0.71
Water scarcity	1.00	0.97	1.00	0.83	1.11	0.97	0.93	1.00	0.98	1.15

Product Number	Homo. 4: GMM2222BBBG00C03					Homo. 5: GMM2222BABG00C04 (Minimum)				
Phases	Manu.	Dist.	Inst.	Use	EoL	Manu.	Dist.	Inst.	Use	EoL
Climate change - total	0.92	0.91	1.00	0.89	0.84	0.91	0.90	1.00	0.81	0.83
Climate change - fossil fuels	1.08	0.91	1.00	0.89	0.87	1.08	0.90	1.00	0.81	0.86
Climate change - biogenics	0.92	0.91	1.00	0.89	0.84	0.91	0.90	1.00	0.81	0.83

Climate change - land use and land use transformation	1.00	0.91	1.00	0.89	0.60	1.00	0.90	1.00	0.81	0.58
Ozone depletion	1.03	0.91	1.00	0.89	0.78	1.03	0.90	1.00	0.81	0.76
Acidification (AP)	0.96	0.91	1.00	0.89	0.80	0.95	0.90	1.00	0.81	0.79
Freshwater eutrophication	0.58	0.91	1.00	0.89	0.45	0.56	0.90	1.00	0.81	0.43
Marine aquatic eutrophication	0.93	0.91	1.00	0.89	0.88	0.92	0.90	1.00	0.81	0.88
Terrestrial eutrophication	0.93	0.91	1.00	0.89	0.79	0.92	0.90	1.00	0.81	0.78
Photochemical ozone formation	0.94	0.91	1.00	0.89	0.77	0.93	0.90	1.00	0.81	0.76
Depletion of abiotic resources - elements	1.27	0.91	1.00	0.89	0.43	1.25	0.90	1.00	0.81	0.41
Depletion of abiotic resources - fossil fuels	0.84	0.91	1.00	0.89	0.66	0.82	0.90	1.00	0.81	0.65
Water scarcity	0.94	0.91	1.00	0.89	1.14	0.93	0.90	1.00	0.81	1.13

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