ENVIRONMENTAL
PRODUCT DECLARATION

PRODUCT ENVIRONMENTAL PROFILE – ARIMO FIT

Reference product: ArimoFit G2 M84 PW19 42-840 ETDD

Registration number	TRLX-00018-V01.01-EN	Drafting rules	PCR-ed4-EN-2021 09 06
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Independent verification of the declaration and data, in compliance with ISO 14025: 2006

Internal		External	x

The PCR review was conducted by a panel of experts chaired by Julie Orgelet (DDemain)

PEPs are compliant with XP C08-100-1:2016 or EN 50693:2019
The components of the present PEP may not be compared with components from any other program.

Document complies with ISO 14025:2006
"Environmental labels and declarations.
Type III environmental declarations"

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1. GENERAL INFORMATION

1.1 Product information

Square recessed LED luminaire with microprismatic cover PW. Version M84 (625 mm x 625 mm). Optionally, the luminaire can be equipped with an emergency light system for ceiling recessing with an emergency light operation time of 3 hours. In emergency light operation, the luminaire luminous flux is 575 lm. Generation of an enhanced depth effect in the room. For system ceilings with exposed grids. The luminaire body is flush with the ceiling system on the room side. In combination with accessories to be ordered separately, suitable for plasterboard ceiling openings and for flush ceiling surface mounting. The Sky frame, optionally available as an accessory, creates a room-atmospheric depth effect in the classic, flat modular ceiling; the 3-dimensional contour of a skylight is reproduced. The optical system consists of a highly efficient PMMA cover with microprisms. The microstructured PMMA prism surface of the optical system has a glare-reducing effect, is non-yellowing and does not cloud. With symmetric limited wide light distribution. Glare evaluation according to UGR rating (EN 12464-1) < 19. Suitable for VDU workstations according to EN 12464-1 via limited luminance L ⩽ 3000 cd/ 2 for beam angle above 65° all-round. Harmonious light effect due to homogeneously illuminated light emission. Individual design of the light emission surface (e.g. with printing) and other special solutions are possible on request. Luminaire luminous flux and light color fixed. Luminaire luminous flux 4200 lm, connected load 31 W, maximum luminous efficiency of luminaire 135 lm/W. Light colour neutral white, correlated colour temperature (CCT) 4000 K, general colour rendering index (CRI) R a > 80. Colour locus tolerance (initial MacAdam) ⩽ 3 SDCM. Mean rated service life L80(t q 25 °C) = 100,000 h, mean rated service life L90(t q 25 °C) = 50,000 h. The light source is replaceable according to the ecodesign requirements (VO (EU) 2019/2020). Luminaire body of extruded aluminium profile. Surface coated white (RAL 9016). Luminaire dimensions (L x W x H): 620 mm, 620 mm, 22 mm. The all-round edge of the frame profile assists mounting. The luminaire frame is profiled in a 3-dimensional way to generate a depth effect on the ceiling. Luminaire can be covered with insulatin material at ta 25°C, ta35 °C without insulation materila can be also be used. Safety class (EN 61140): II, protection rating (DIN EN 60529): IP20, Protection rating on room side: IP40, impact resistance level in accordance with IEC 62262: IK03, testing temperature of wire glow test in accordance with IEC 60695-2-11: 650 °C. Weight: 3,5 kg. Polarity-protected rapid connection with mains through-wiring up to Ø 2.5 mm 2 . Connection of the ballast unit to the luminaire (Plug 'N Play). The luminaire's packaging concept facilitates separate removal of the control gear unit for pre-assembly, leaving the remaining luminaire components protected until final assembly. With external operating device, digitally dimmable (DALI). Control gear unit according to DALI-2 standard (EN 62386). Luminaire is switchable and dimmable by means of touch functionality via DALI control terminals (Touch DIM). The control gear unit is replaceable in accordance with the ecodesign requirements (VO (EU) 2019/2020). Control gear unit is open-circuit proof and protected against faulty connection, short circuit, overload and overtemperature. Output ripple of the control gear unit ⩽ 4 % for effective control of the LED system and for flicker-free light. The ENEC certification by an independent testing laboratory is in preparation. The luminaire can be equipped with the Monitoring Ready (MOR) functionality on request. The luminaire complies with the fundamental requirements of applicable EU regulations and product safety legislation and bears the CE symbol. The luminaire is part of a range of recessed, surface-mounted and suspended luminaires with a harmonised appearance. The application variety of the product series is underlined by variants regarding luminous flux packages, light distribution curves and protection ratings. On request, the basic range can be expanded with project-specific luminaire features. Luminaire available for 10 years, spare parts (LED module, control gear unit, optical system) for 15 years from date of invoice, subject to reasonable modifications in the interests of progress.

1. GENERAL INFORMATION

Table 1: Key technological data

Information	Unit	
Light source	–	Integrated LED module
Power supply	–	External power supply
Color temperature	K	4000
Protection index for water and dust (IP)	–	IP20
Impact resistance index (IK)	–	IK03
Nominal operating voltage	V	220-240
Declared lifetime of the luminaire	Hours	100.000
Outgoing luminous flux/Useful output flux	Lumen	4.200
Electrical input power	W	31
Luminous efficiency	Lumen/W	135
Dimension	mm	620 x 620 x 22
Reference use scenario	–	Office
Lifetime in years according to reference use scenario	yr	40

1.2 Goal and Scope

Following information have been used to generate the PEP:

Table 2: Goal and Scope

Information	
Functional unit	Provide lighting that delivers an outgoing artificial luminous flux of 1,000 lumens during a reference lifetime of 35,000 hours
Reference flow / declared unit*	0.0833 pieces of product
Life cycle stages covered	Cradle-to-grave and Module D
Product category according to PSR	Luminaires
Product name	ArimoFit G2 M84 PW19 42-840 ETDD

* The reference flow is calculated as: (1,000/outgoing luminous flux of the analyzed product in lumens) x (35,000/declared product lifetime of the analyzed product in hours)
Consequently, the reference flow of the following product correspond to: (1,000/4,200) x (35,000/100,000) = 0.0833

2. CONSTITUENT MATERIAL

2.1 Overview

The product composition is shown in the following table.

Table 3: Product composition

	Weight [in kg]	Share [in %]
Total weight	4.445	100
Product	3.500	79
Packaging	0.945	21
Additional equipment	0	0

2.2 Product

The material composition of the product is shown in the following table.

Table 4: Material composition - product

	Weight [in kg]	Share [in %]
Total weight	3.500	100
Metals	0.750	21
• Aluminium	0.750	21
Plastics	2.603	74
• Polymethyl methacrylate (PMMA)	1.901	54
• PC	0.142	4
• Polyester	0.040	1
• Other	0.520	15
Electronics (incl. wires)	0.147	4

2.3 Packaging

The product composition is shown in the following table.

Table 5: Material composition – packaging

	Weight [in kg]	Share [in %]
Total weight	0.945	100
Paper/cardboard	0.790	84
Plastics	0.155	16

3. INFORMATION ON LIFE CYCLE STAGES

3.1 Manufacturing stage (A1-A3)

The product components are manufactured or assembled by TRILUX GmbH & Co. KG in Arnsberg (Germany). The production sites in Arnsberg, Alhama de Aragón and Zaragoza (both Spain) have certified environmental management systems in accordance with ISO 14001. The Arnsberg site also has a certified energy management system according with ISO 50001.
TRILUX products are manufactured in compliance with RoHS 2011/65/EU and REACH 1907/2006 declarations.

The energy model used in manufacturing is based on Sphera's Managed LCA Content and primary information on the energy mix of TRILUX.

3.2 Distribution stage (A4)

The main market of the product is Europe and there is no specific data available. For this reason, an intracontinental transport (3,500 km by truck (diesel driven, EURO 0-6, >27t payload) to the place of use following PEP-PCR–ed4-EN-2021 09 06 is considered.

3.3 Installation stage (A5)

The product can easily be installed without any special tool. No energy or material input is required. Packaging waste is treated according to the scenario given in PEP-PSR-0014-ed2-EN-2023 07 13.

3.4 Use stage (B1-B7)

The product has no direct emissions (B1). No maintenance (B2), repair (B3), replacement (B4), or re-furbishment (B5) is required. The use of the product does consume electricity (B6), but no water (B7).

The operational electricity consumption over the entire lifetime of the product is 2,350 kWh. It has been calculated according to PSR edition 2. The used energy model refers to an average European electricity grid mix from Sphera's Managed LCA Content.

3.5 End-of-life stage (C1-C4)

The product falls under the Waste from Electrical and Electronic Equipment (WEEE) directive 2012/19/EU. Therefore, a collection rate of 100% and a typical end-of-life scenario for electronic products is assumed. All (mechanical and electronic) metals are recycled. Plastic & renewable materials are incinerated with energy recovery. Batteries & glass are landfilled.
For the transport to end-of-life treatment 1,000 km by truck according to PEP PCR is considered.

3.6 Benefits and loads beyond the system boundaries stage (D)

The recycling of the product (incl. packaging) and incineration with energy recovery generates environmental benefits and loads beyond the system boundaries (D). The calculation of this module is in line with the formulars described in PEP-PCR–ed4-EN-2021 09 06. The amount of the material flows used for the calculation are listed in the table below.

3. INFORMATION ON LIFE CYCLE STAGES

Table 7: Material flows for benefits and loads beyond the system boundaries per functional unit

	Weight [in kg]
Total weight going into reuse	0,00E+00
Total weight of product going into recycling	6,44E-02
Total weight of product going into incineration with energy recovery	2,27E-01
Total weight of packaging going into recycling	5,93E-02
Total weight of packaging going into incineration with energy recovery	1,07E-02

4. ENVIRONMENTAL INFORMATION

The environmental information included in this study cover all stages of the life cycle („cradle-to grave"). The life cycle is divided into manufacturing stage (A1-A3), distribution stage (A4), installation stage (A5), use stage (B1-B7, but only applicable modules are shown), End-of-life stage (C1-C4) and benefits and loads beyond the system boundaries (D). The results refer to the core environmental impact indicators and mandatory indicators describing resource use, waste categories, and output flows according to PEP-PCR–ed4,- EN-2021 09 06 and EN 15804+A2:2019.

The results have been calculated using the LCA Software "LCA for Experts 10" and the LCI database "Sphera Managed LCA Content".

4.1 Results per functional unit

The following results of the environmental declaration have been developed, considering an outgoing artificial luminous flux of 1,000 lumens over a reference lifetime of 35,000 hours.

Acronyms: GWP-total=Global Warming Potential total; GWP-biogenic=Global Warming Potential biogenic; GWP-fossil=Global Warming Potential fossil; GWP-luluc=Global Warming Potential land use and land use change; ODP=Ozone Depletion; AP=Acidification; E=Eutrophication; POCP=Photochemical ozone formation; ADPE=Depletion of abiotic resources-minerals and metals; ADPF=Depletion of abiotic resources-fossil fuels; WDP=Water re- source deprivation; PERE=Renewable primary energy (without raw material); PERM=Renewable primary energy (raw material); PERT=Total use of renewable primary energy; PENRE=Non-renewable primary energy (without raw material); PENRM=Non-renewable primary energy (raw material); PENRT=Total use of non-renewable primary energy; SM=Use of secondary materials; RSF=Use of renewable secondary fuels; NRSF=Use of non-renewable secondary fuels; FW=Net use of fresh water; HWD=Hazardous waste disposed; NHWD=Non-hazardous waste disposed; RWD=Radioactive waste disposed; CRU=Components for reuse; MFR=Materials for recycling; MER=Materials for energy recovery; EEE=Exported electricity; EET=Exported thermal energy; Biog. C in product=Biogenic carbon content of the product; Biog. C in packaging=Biogenic carbon content of the associated packaging

4. ENVIRONMENTAL INFORMATION

Table 8: Results core environmental impact indicators per functional unit (0.0833 kg product incl. packaging)

Impact category	Unit	Total (excl. D)	Manufacturing			Distribution	Installation
			A1	A2	A3	A4	A5
GWP - total	kg CO2 eq.	4,61E+01	2,90E+00	2,16E-02	3,91E-01	9,77E-02	6,84E-02
GWP - fossil	kg CO2 eq.	4,57E+01	2,91E+00	2,03E-02	3,71E-01	9,58E-02	4,81E-02
GWP - biogenic	kg CO2 eq.	3,98E-01	-7,81E-03	1,15E-03	1,91E-02	1,70E-03	2,02E-02
GWP - luluc	kg CO2 eq.	7,09E-03	1,33E-03	1,65E-04	4,90E-04	2,37E-04	1,42E-04
ODP	kg CFC-11 eq.	7,83E-10	1,09E-11	2,51E-15	3,69E-12	8,14E-15	7,62E-14
AP	Mole of H+ eq.	1,03E-01	1,13E-02	9,08E-05	5,83E-04	1,67E-03	6,69E-05
EP - freshwater	kg P eq.	1,67E-04	6,29E-06	6,58E-08	3,80E-06	1,09E-07	9,61E-07
EP - marine	kg N eq.	2,43E-02	2,07E-03	3,33E-05	2,35E-04	5,98E-04	2,94E-05
EP - terrestrial	Mole of N eq.	2,55E-01	2,25E-02	3,70E-04	2,37E-03	6,56E-03	2,80E-04
POCP	kg NMVOC eq.	6,56E-02	6,30E-03	8,67E-05	6,72E-04	1,64E-03	6,30E-05
ADPE	kg Sb eq.	9,89E-05	9,23E-05	1,21E-09	6,55E-08	2,33E-09	1,35E-08
ADPF	MJ	9,29E+02	4,37E+01	2,76E-01	6,13E+00	1,21E+00	5,13E-01
WDP	m^3 world equiv.	9,88E+00	5,25E-01	2,20E-04	1,85E-02	4,25E-04	3,28E-03
Impact category	Unit	Use	End of life				Benefits and loads beyond the system boundaries stage
		B2	B6	C2	C3	C4	D
GWP - total	kg CO2 eq.	0.00E+00	4,20E+01	2,12E-02	5,56E-01	0.00E+00	-7,37E-01
GWP - fossil	kg CO2 eq.	0.00E+00	4,17E+01	1,98E-02	5,56E-01	0.00E+00	-8,13E-01
GWP - biogenic	kg CO2 eq.	0.00E+00	3,62E-01	1,29E-03	5,72E-05	0.00E+00	7,68E-02
GWP - luluc	kg CO2 eq.	0.00E+00	4,53E-03	1,86E-04	1,20E-05	0.00E+00	-3,30E-04
ODP	kg CFC-11 eq.	0.00E+00	7,69E-10	2,61E-15	2,16E-13	0.00E+00	-2,11E-12
AP	Mole of H+ eq.	0.00E+00	8,90E-02	3,21E-05	1,01E-04	0.00E+00	-2,71E-03
EP - freshwater	kg P eq.	0.00E+00	1,55E-04	7,33E-08	5,40E-08	0.00E+00	-1,87E-06
EP - marine	kg N eq.	0.00E+00	2,13E-02	1,24E-05	2,38E-05	0.00E+00	-5,36E-04
EP - terrestrial	Mole of N eq.	0.00E+00	2,22E-01	1,43E-04	4,67E-04	0.00E+00	-5,77E-03
POCP	kg NMVOC eq.	0.00E+00	5,68E-02	2,85E-05	6,51E-05	0.00E+00	-1,55E-03
ADPE	kg Sb eq.	0.00E+00	6,44E-06	1,33E-09	1,68E-09	0.00E+00	-7,77E-05
ADPF	MJ	0.00E+00	8,77E+02	2,73E-01	3,13E-01	0.00E+00	-1,22E+01
WDP	m^3 world equiv.	0.00E+00	9,28E+00	2,42E-04	5,31E-02	0.00E+00	-8,68E-02

4. ENVIRONMENTAL INFORMATION

Table 9: Results indicators describing resource use, waste categories, and output flows per functional unit (0.0833 kg product incl. packaging)

Impact category	Unit	Total (excl. D)	Manufacturing			Distribution	Installation
			A1	A2	A3	A4	A5
PERE	MJ	5,32E+02	6,65E+00	1,78E-02	1,37E+00	2,90E-02	2,26E-01
PERM	MJ	1,17E+00	2,22E-01	0,00E+00	1,04E+00	0,00E+00	-9,81E-02
PERT	MJ	5,34E+02	6,87E+00	1,78E-02	2,42E+00	2,90E-02	1,28E-01
PENRE	MJ	9,28E+02	3,65E+01	2,77E-01	5,57E+00	1,21E+00	7,24E-01
PENRM	MJ	1,30E+00	7,24E+00	0,00E+00	5,58E-01	0,00E+00	-2,10E-01
PENRT	MJ	9,29E+02	4,38E+01	2,77E-01	6,13E+00	1,21E+00	5,14E-01
SM	kg	0,00E+00	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	M3	4,43E-01	1,59E-02	1,96E-05	2,23E-03	3,26E-05	5,05E-04
HWD	kg	3,15E-07	2,58E-07	8,59E-13	4,21E-08	3,80E-12	1,47E-08
NHWD	kg	1,09E+00	3,64E-01	4,02E-05	1,38E-02	1,32E-04	1,05E-02
RWD	kg	1,40E-01	7,80E-04	4,95E-07	2,29E-04	1,67E-06	1,29E-05
CRU	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	kg	1,64E-01	0,00E+00	0,00E+00	4,01E-02	0,00E+00	5,93E-02
MER	kg	2,49E-01	0,00E+00	0,00E+00	1,10E-02	0,00E+00	1,07E-02
EEE	MJ	8,88E-01	1,58E-03	0,00E+00	0,00E+00	0,00E+00	3,68E-02
EET	kg	2,03E+00	2,83E-03	0,00E+00	0,00E+00	0,00E+00	6,18E-02
Biog. C in product	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Biog. C in packaging	kg	3,17E+00	5,62E-01	0,00E+00	2,60E+00	0,00E+00	0,00E+00
Impact category	Unit	Use	End of life				Benefits and loads beyond the system boundaries stage
		B2	B6	C2	C3	C4	D
PERE	MJ	0.00E+00	5,24E+02	1,99E-02	1,11E-01	0.00E+00	-4,62E+00
PERM	MJ	0.00E+00	0,00E+00	0,00E+00	0,00E+00	0.00E+00	0,00E+00
PERT	MJ	0.00E+00	5,24E+02	1,99E-02	1,11E-01	0.00E+00	-4,62E+00
PENRE	MJ	0.00E+00	8,77E+02	2,74E-01	6,60E+00	0.00E+00	-1,22E+01
PENRM	MJ	0.00E+00	0,00E+00	0,00E+00	-6,29E+00	0.00E+00	0,00E+00
PENRT	MJ	0.00E+00	8,77E+02	2,74E-01	3,13E-01	0.00E+00	-1,22E+01
SM	kg	0.00E+00	0,00E+00	0,00E+00	0,00E+00	0.00E+00	7,12E-02
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	M3	0.00E+00	4,23E-01	2,18E-05	1,28E-03	0.00E+00	-8,11E-03
HWD	kg	0.00E+00	0,00E+00	8,48E-13	1,22E-10	0.00E+00	-1,49E-08
NHWD	kg	0.00E+00	6,42E-01	4,18E-05	5,64E-02	0.00E+00	-1,23E-01
RWD	kg	0.00E+00	1,39E-01	5,13E-07	1,41E-05	0.00E+00	-8,17E-04
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	6,44E-02	0.00E+00	0,00E+00
MER	kg	0.00E+00	0,00E+00	0,00E+00	2,27E-01	0.00E+00	0,00E+00
EEE	MJ	0.00E+00	0,00E+00	0,00E+00	8,49E-01	0.00E+00	0,00E+00
EET	kg	0.00E+00	0,00E+00	0,00E+00	1,97E+00	0.00E+00	0,00E+00
Biog. C in product	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0,00E+00
Biog. C in packaging	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0,00E+00

4. ENVIRONMENTAL INFORMATION

4.2 Results per unit of product

The following results of the environmental declaration have been developed, considering one piece of product.

Table 10: Results core environmental impact indicators per unit of product

Impact category	Unit	Total (excl. D)	Manufacturing			Distribution	Installation
			A1	A2	A3	A4	A5
GWP - total	kg CO2 eq.	5,53E+02	3,49E+01	2,59E-01	4,69E+00	1,17E+00	8,21E-01
GWP - fossil	kg CO2 eq.	5,48E+02	3,49E+01	2,44E-01	4,45E+00	1,15E+00	5,77E-01
GWP - biogenic	kg CO2 eq.	4,77E+00	-9,37E-02	1,38E-02	2,29E-01	2,04E-02	2,42E-01
GWP - luluc	kg CO2 eq.	8,51E-02	1,59E-02	1,98E-03	5,88E-03	2,84E-03	1,70E-03
ODP	kg CFC-11 eq.	9,41E-09	1,31E-10	3,01E-14	4,43E-11	9,78E-14	9,14E-13
AP	Mole of H+ eq.	1,23E+00	1,36E-01	1,09E-03	7,00E-03	2,00E-02	8,04E-04
EP - freshwater	kg P eq.	2,00E-03	7,56E-05	7,90E-07	4,57E-05	1,31E-06	1,15E-05
EP - marine	kg N eq.	2,92E-01	2,48E-02	3,99E-04	2,82E-03	7,18E-03	3,53E-04
EP - terrestrial	Mole of N eq.	3,06E+00	2,70E-01	4,45E-03	2,84E-02	7,87E-02	3,36E-03
POCP	kg NMVOC eq.	7,88E-01	7,57E-02	1,04E-03	8,07E-03	1,97E-02	7,56E-04
ADPE	kg Sb eq.	1,19E-03	1,11E-03	1,45E-08	7,86E-07	2,80E-08	1,61E-07
ADPF	MJ	1,12E+04	5,25E+02	3,31E+00	7,36E+01	1,45E+01	6,16E+00
WDP	m³ world equiv.	1,19E+02	6,30E+00	2,64E-03	2,22E-01	5,11E-03	3,93E-02
Impact category	Unit	Use	End of life				Benefits and loads beyond the system boundaries stage
		B2	B6	C2	C3	C4	D
GWP - total	kg CO2 eq.	0.00E+00	5,04E+02	2,55E-01	6,67E+00	0.00E+00	-8,84E+00
GWP - fossil	kg CO2 eq.	0.00E+00	5,00E+02	2,37E-01	6,67E+00	0.00E+00	-9,76E+00
GWP - biogenic	kg CO2 eq.	0.00E+00	4,35E+00	1,54E-02	6,87E-04	0.00E+00	9,22E-01
GWP - luluc	kg CO2 eq.	0.00E+00	5,43E-02	2,23E-03	1,44E-04	0.00E+00	-3,96E-03
ODP	kg CFC-11 eq.	0.00E+00	9,23E-09	3,13E-14	2,59E-12	0.00E+00	-2,54E-11
AP	Mole of H+ eq.	0.00E+00	1,07E+00	3,86E-04	1,21E-03	0.00E+00	-3,26E-02
EP - freshwater	kg P eq.	0.00E+00	1,87E-03	8,79E-07	6,48E-07	0.00E+00	-2,24E-05
EP - marine	kg N eq.	0.00E+00	2,56E-01	1,49E-04	2,86E-04	0.00E+00	-6,44E-03
EP - terrestrial	Mole of N eq.	0.00E+00	2,67E+00	1,71E-03	5,60E-03	0.00E+00	-6,92E-02
POCP	kg NMVOC eq.	0.00E+00	6,82E-01	3,42E-04	7,82E-04	0.00E+00	-1,86E-02
ADPE	kg Sb eq.	0.00E+00	7,73E-05	1,59E-08	2,02E-08	0.00E+00	-9,32E-04
ADPF	MJ	0.00E+00	1,05E+04	3,28E+00	3,75E+00	0.00E+00	-1,46E+02
WDP	m³ world equiv.	0.00E+00	1,11E+02	2,91E-03	6,38E-01	0.00E+00	-1,04E+00

4. ENVIRONMENTAL INFORMATION

Table 11: Results indicators describing resource use, waste categories, and output flows per unit of product

Impact category	Unit	Total (excl. D)	Manufacturing			Distribution	Installation
			A1	A2	A3	A4	A5
PERE	MJ	6,39E+03	7,99E+01	2,14E-01	1,65E+01	3,48E-01	2,71E+00
PERM	MJ	1,40E+01	2,66E+00	0,00E+00	1,25E+01	0,00E+00	-1,18E+00
PERT	MJ	6,41E+03	8,25E+01	2,14E-01	2,90E+01	3,48E-01	1,54E+00
PENRE	MJ	1,11E+04	4,38E+02	3,32E+00	6,69E+01	1,46E+01	8,69E+00
PENRM	MJ	1,56E+01	8,69E+01	0,00E+00	6,70E+00	0,00E+00	-2,52E+00
PENRT	MJ	1,12E+04	5,25E+02	3,32E+00	7,36E+01	1,46E+01	6,17E+00
SM	kg	0,00E+00	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	M3	5,32E+00	1,91E-01	2,35E-04	2,68E-02	3,91E-04	6,06E-03
HWD	kg	3,78E-06	3,10E-06	1,03E-11	5,06E-07	4,57E-11	1,76E-07
NHWD	kg	1,30E+01	4,37E+00	4,83E-04	1,66E-01	1,59E-03	1,27E-01
RWD	kg	1,69E+00	9,36E-03	5,95E-06	2,74E-03	2,00E-05	1,55E-04
CRU	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	kg	1,97E+00	0,00E+00	0,00E+00	4,81E-01	0,00E+00	7,11E-01
MER	kg	2,99E+00	0,00E+00	0,00E+00	1,33E-01	0,00E+00	1,28E-01
EEE	MJ	1,07E+01	1,90E-02	0,00E+00	0,00E+00	0,00E+00	4,42E-01
EET	kg	2,44E+01	3,40E-02	0,00E+00	0,00E+00	0,00E+00	7,42E-01
Biog. C in product	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Biog. C in packaging	kg	3,80E+01	6,75E+00	0,00E+00	3,13E+01	0,00E+00	0,00E+00
Impact category	Unit	Use	End of life				Benefits and loads beyond the system boundaries stage
		B2	B6	C2	C3	C4	D
PERE	MJ	0.00E+00	6,29E+03	2,38E-01	1,33E+00	0.00E+00	-5,55E+01
PERM	MJ	0.00E+00	0,00E+00	0,00E+00	0,00E+00	0.00E+00	0,00E+00
PERT	MJ	0.00E+00	6,29E+03	2,38E-01	1,33E+00	0.00E+00	-5,55E+01
PENRE	MJ	0.00E+00	1,05E+04	3,29E+00	7,92E+01	0.00E+00	-1,46E+02
PENRM	MJ	0.00E+00	0,00E+00	0,00E+00	-7,55E+01	0.00E+00	0,00E+00
PENRT	MJ	0.00E+00	1,05E+04	3,29E+00	3,75E+00	0.00E+00	-1,46E+02
SM	kg	0.00E+00	0,00E+00	0,00E+00	0,00E+00	0.00E+00	8,54E-01
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	M3	0.00E+00	5,08E+00	2,61E-04	1,54E-02	0.00E+00	-9,74E-02
HWD	kg	0.00E+00	0,00E+00	1,02E-11	1,46E-09	0.00E+00	-1,79E-07
NHWD	kg	0.00E+00	7,71E+00	5,01E-04	6,77E-01	0.00E+00	-1,48E+00
RWD	kg	0.00E+00	1,67E+00	6,16E-06	1,69E-04	0.00E+00	-9,81E-03
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	7,74E-01	0.00E+00	0,00E+00
MER	kg	0.00E+00	0,00E+00	0,00E+00	2,73E+00	0.00E+00	0,00E+00
EEE	MJ	0.00E+00	0,00E+00	0,00E+00	1,02E+01	0.00E+00	0,00E+00
EET	kg	0.00E+00	0,00E+00	0,00E+00	2,36E+01	0.00E+00	0,00E+00
Biog. C in product	kg	0.00E+00	0,00E+00	0,00E+00	0,00E+00	0.00E+00	0,00E+00
Biog. C in packaging	kg	0.00E+00	0,00E+00	0,00E+00	0,00E+00	0.00E+00	0,00E+00