

Environmental Product Declaration



In accordance with ISO 14025 and EN 15804:2012+A2:2019 for:

Greenline aluminium profiles

EPD of multiple products by Purso Oy, based on a representative product.

Products included are Greenline aluminium, extruded, Greenline aluminium, extruded and anodized and Greenline aluminium, extruded and painted.



Programme:	The International EPD® System, www.environdec.com
Programme operator:	EPD International AB
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An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at www.environdec.com



General information

Programme information

Programme:	The International EPD® System
Address:	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
Website:	www.environdec.com
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Accountabilities for PCR, LCA and independent, third-party verification
Product Category Rules (PCR)
CEN standard EN 15804 serves as the Core Product Category Rules (PCR)
Product category rules (PCR): 2019:14 Construction products version 1.3.3. UN CPC code: Group 412 – Products of iron or steel; Class 4128.
PCR review was conducted by: The Technical Committee of the International EPD® System. A full list of members available on www.environdec.com . The review panel may be contacted via info@environdec.com . Chair of the PCR review: -
Life Cycle Assessment (LCA)
LCA accountability: Anna Pietilä, Environmental analyst. Organization: Ecobio Oy.
Third-party verification
Independent third-party verification of the declaration and data, according to ISO 14025:2006, via: <input checked="" type="checkbox"/> EPD verification by individual verifier Third-party verifier: Hannu Karppi, Ramboll Finland Oy Approved by: The International EPD® System Procedure for follow-up of data during EPD validity involves third party verifier: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

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

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

Company information

Owner of the EPD: Purso Oy

Contact: Timo Tuohimaa
Purso Oy
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www.purso.fi

Description of the organisation:

Purso Oy is a Finnish company specializing in innovative lighting solutions and aluminum structures. With a commitment to sustainability and cutting-edge design, Purso offers a diverse range of products for various industries, including architecture, retail, and transportation. Their expertise lies in LED lighting systems, aluminum profiles, and custom-made solutions, catering to the unique needs of each client.

Name and location of production site: Alumiinitie 1, 37200 Siuro, Finland

Product information

Product name: Aluminium profile

Results declared in this EPD document are for the representative product of Greenline aluminium products manufactured by Purso. Extruded product holds the highest production volume and is thus selected as the representative product.

Product identification: Extruded aluminium profiles, extruded and anodized aluminium profiles and extruded and painted aluminium profiles made from secondary aluminium.

Product description: Some of the delivered profiles are also surface treated, either by anodization or painting. The profiles are used by the construction industry in facade constructions or as components for e.g. doors, windows, glass roofs and louvre slats. Other uses are also possible. The profiles are manufactured at the Siuro factory in Finland.

UN CPC code: 429

Geographical scope: Europe

LCA information

Functional unit / declared unit: The declared unit is 1 kg of aluminium profile.

Reference service life: Not applicable.

Time representativeness: The data is collected covering production year 2023. Ecoinvent data used for modelling is from 2022.

Database(s) and LCA software used: Ecoinvent 3.9.1 with "Allocation, cut-off by classification" system model and SimaPro LCA software (version 9.4.0.2).

Description of system boundaries:

Cradle to gate with modules C1–C4 and module D (A1–A3 + C + D) covering the product stage (A1–A3), the end-of-life stage (C1–C4) and benefits and loads beyond the system boundary (D).

Module A1: Production of raw materials used in the products, i.e. of the aluminium billets.

Module A2: includes the transportation of raw materials to Purso’s production facility.

Module A3: includes the manufacturing process that consists of extrusion or extrusion and either painting or anodization as surface treatment. The source of electricity is 100% nuclear power.

Module C1: Deconstruction is considered to be done by excavation.

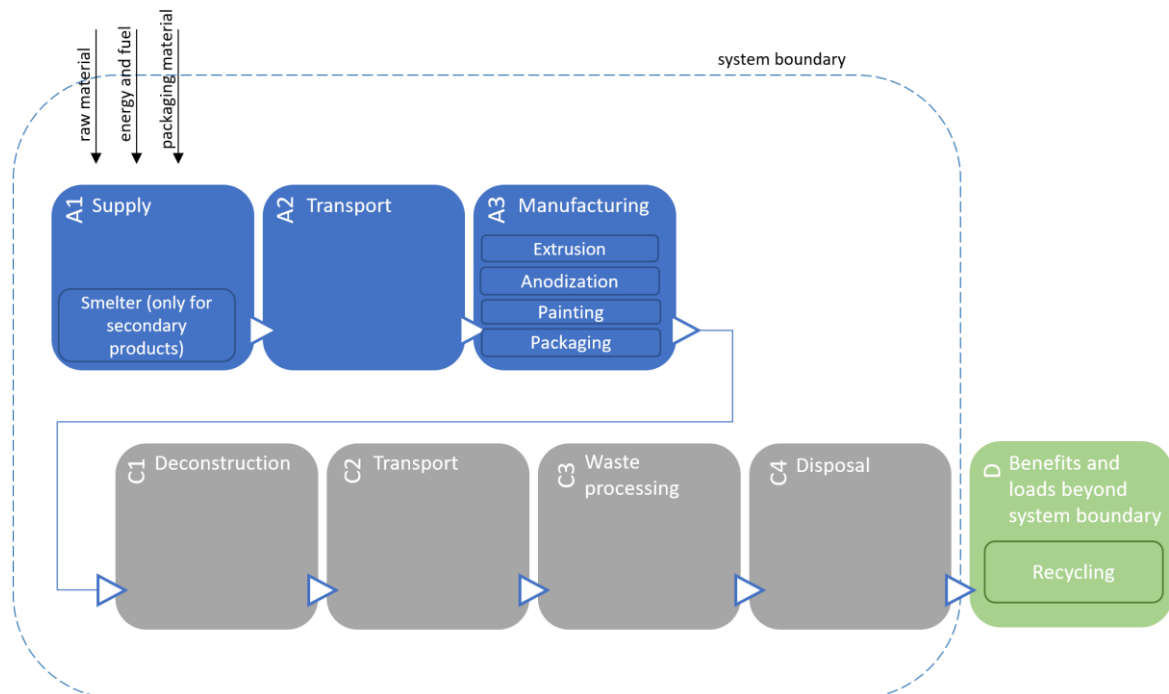
Module C2: Transport distance to waste processing or disposal is estimated to be 50 km from the construction site.

Module C3: After collecting, aluminum is shredded, sorted, and shipped for remelting. Aluminium sent to recycling is assumed to be 95%.

Module C4: Landfilling of the remaining 5% of deconstructed aluminium.

Module D: Accounts for benefits due to the avoided production of primary aluminium.

System diagram:



More information:

LCA practitioner: Ecobio Oy, info@ecobio.fi. Explanatory material can be obtained from the EPD owner and/or LCA practitioner.

Data quality: The quality requirements for the life cycle assessment were set according to the EN ISO 14044 and the EN 15804 standards.

Cut-off rule: 1% cut-off rule was applied for input flows in the inventory. The material used is as up-to-date as possible and at most five years old for producer specific data and at most ten years old for generic data. Environmental impacts of infrastructure, facilities (capital goods), transportation of employees required for and during production are excluded along the whole life cycle.

Allocation: Environmental impacts were allocated to the produced aluminium scrap based on economic allocation. The economic allocation is based on the total revenue of the products, and the impacts are allocated separately for the aluminium scrap and secondary aluminium profile. The production related inputs and outputs used to produce different aluminium products are allocation based on the final product outputs, by means of mass allocation.

Excluded processes: transport of packaging materials (external transport in A2), transport of waste to treatment (A3) and processing infrastructure.

Modules declared, geographical scope, share of specific data (in GWP-GHG indicator) and data variation:

	Product stage		Construction process stage			Use stage							End of life stage				Resource recovery stage
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
Module	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Modules declared	X	X	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X
Geography	EU27	EU27	EU27	-	-	-	-	-	-	-	-	-	EU27	EU27	EU27	EU27	EU27
Specific data	5 %		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	<10%		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	0 %		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Content declaration

Product components	Weight, kg	Post-consumer material, weight-%	Renewable material, weight-%
Aluminium	1	25	0
TOTAL	1	25	0

Product variation	Packaging materials	Weight, kg	Weight-% (versus the product)
Extruded aluminium profile	Cardboard	0,002	0,2
	Plastic	0,0003	0,03
	Wood	0,006	0,6
	Steel	0,0001	0,01
	TOTAL	0,0084	0,84
Anodized aluminium profile	Carboard	0,004	0,4
	Plastic	0,0007	0,07
	Wood	0,012	1,2
	Steel	0,0002	0,02
	TOTAL	0,0169	1,69
Painted aluminium profile	Carboard	0,004	0,4
	Plastic	0,0007	0,07
	Wood	0,01	1
	Steel	0,0002	0,02
	TOTAL	0,0149	1,49

Input material composition	Weight-%	GWP-GHG**
Pre-consumer scrap*	75	2572 kg CO2 eq./tonne
Post-consumer scrap	25	0 kg CO2 eq./tonne

* Including both internal and external factory scarp. Internal factory scarp is from primary aluminium production.

** For modules A1-A3.

The main material of the profile is aluminium (> 98,5 weight-%).

The aluminium profiles do not contain substances which exceed the limits for registration with the European Chemicals Agency regarding the “Candidate List of Substances of Very High Concern for Authorisation”.

Manufacturing

Three manufacturing stages are included in the manufacturing process: extrusion, anodization and painting. Every profile is extruded, but there can also be anodization or painting added for surface finishing. The source of electricity is 100% nuclear power according to a Guarantee of Origin, with GWP-GHG impact of 9,1 gCO₂eq./kWh.

Results

The aluminium profiles are extruded and treated with either anodization or painting. The EPD includes 3 versions of Greenline aluminium profiles: extruded secondary aluminium, extruded and anodized secondary aluminium, and extruded and painted secondary aluminium. The results are initially presented for extruded aluminium, and they can further be scaled to represent both anodized and painted aluminium by using conversion numbers presented in Appendix I.

Variability between the declared products is more than 10% aggregated over all included modules (A1-A3, C1-C4) in the following impact categories:

- GWP-biogenic
- ODP
- ADP – minerals & metals
- WDP
- Land use related impacts / soil quality

Environmental Information

Potential environmental impact – mandatory indicators according to EN 15804, based on EF 3.1**

Results per declared unit							
Indicator	Unit	A1-A3	C1	C2	C3	C4	D
GWP-fossil	kg CO2 eq.	1,8*10 ⁰	2,3*10 ⁻³	9,4*10 ⁻³	3,2*10 ⁻¹	1,5*10 ⁻³	-4,1*10 ⁰
GWP-biogenic	kg CO2 eq.	6,3*10 ⁻³	4,2*10 ⁻⁷	3,0*10 ⁻⁶	1,9*10 ⁻³	4,8*10 ⁻⁶	-9,2*10 ⁻³
GWP-luluc	kg CO2 eq.	1,5*10 ⁻²	2,9*10 ⁻⁷	4,6*10 ⁻⁶	3,2*10 ⁻⁴	4,4*10 ⁻⁷	-5,8*10 ⁻²
GWP-total	kg CO2 eq.	1,8*10 ⁰	2,3*10 ⁻³	9,4*10 ⁻³	3,2*10 ⁻¹	1,8*10 ⁻³	-4,2*10 ⁰
ODP	kg CFC 11 eq.	5,5*10 ⁻⁸	4,9*10 ⁻¹¹	2,0*10 ⁻¹⁰	2,2*10 ⁻⁹	4,0*10 ⁻¹¹	-1,2*10 ⁻⁷
AP	mol H+ eq.	7,5*10 ⁻³	2,1*10 ⁻⁵	3,1*10 ⁻⁵	1,4*10 ⁻³	9,8*10 ⁻⁶	-2,0*10 ⁻²
EP-freshwater	kg P eq.	5,1*10 ⁻⁵	1,3*10 ⁻⁸	7,5*10 ⁻⁸	6,5*10 ⁻⁶	1,6*10 ⁻⁸	-1,3*10 ⁻⁴
EP-marine	kg N eq.	1,1*10 ⁻³	9,5*10 ⁻⁶	1,0*10 ⁻⁵	2,5*10 ⁻⁴	4,0*10 ⁻⁶	-2,7*10 ⁻³
EP-terrestrial	mol N eq.	1,1*10 ⁻²	1,0*10 ⁻⁴	1,1*10 ⁻⁴	2,8*10 ⁻³	4,4*10 ⁻⁵	-2,9*10 ⁻²
POCP	kg NMVOC eq.	5,1*10 ⁻³	3,1*10 ⁻⁵	4,6*10 ⁻⁵	8,9*10 ⁻⁴	1,6*10 ⁻⁵	-1,3*10 ⁻²
ADP-minerals & metals*	kg Sb eq.	2,4*10 ⁻⁶	1,0*10 ⁻⁹	3,0*10 ⁻⁸	6,7*10 ⁻⁶	6,7*10 ⁻⁹	4,3*10 ⁻⁵
ADP-fossil*	MJ	3,2*10 ¹	3,0*10 ⁻²	1,3*10 ⁻¹	2,1*10 ⁰	3,2*10 ⁻²	-6,0*10 ¹
WDP*	m ³	4,4*10 ⁻¹	6,8*10 ⁻⁵	5,4*10 ⁻⁴	3,2*10 ⁻²	1,6*10 ⁻⁴	-3,7*10 ⁻²
Acronyms	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						

* Disclaimer: 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 this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.

** The results of modules A1-A3 shall not be used without considering the results of module C1-C4.

Potential environmental impact – additional mandatory and voluntary indicators, based on EF 3.1

Results per declared unit							
Indicator	Unit	A1-A3	C1	C2	C3	C4	D
GWP-GHG	kg CO ₂ eq.	1,8*10 ⁰	2,3*10 ⁻³	9,5*10 ⁻³	3,2*10 ⁻¹	1,5*10 ⁻³	-4,3*10 ⁰
Particulate matter emissions	Disease incidence	1,4*10 ⁻⁷	5,8*10 ⁻¹⁰	7,5*10 ⁻¹⁰	2,3*10 ⁻⁸	2,2*10 ⁻¹⁰	-2,6*10 ⁻⁷
Ionising radiation, human health *	kBq U ₂₃₅ eq	2,4*10 ⁻¹	9,6*10 ⁻⁶	6,7*10 ⁻⁵	3,2*10 ⁻³	1,1*10 ⁻⁴	-2,1*10 ⁻¹
Ecotoxicity (freshwater) **	CTUe	8,3*10 ⁰	1,6*10 ⁻²	8,3*10 ⁻²	2,2*10 ⁰	8,2*10 ⁻¹	-1,0*10 ¹
Human toxicity, cancer effects **	CTUh	3,4*10 ⁻⁹	1,1*10 ⁻¹²	4,3*10 ⁻¹²	2,0*10 ⁻¹⁰	2,8*10 ⁻¹²	-9,5*10 ⁻⁹
Human toxicity, non-cancer effects **	CTUh	2,9*10 ⁻⁸	5,8*10 ⁻¹²	9,4*10 ⁻¹¹	8,0*10 ⁻⁹	2,6*10 ⁻¹¹	-5,2*10 ⁻⁸
Land use related impacts / soil quality **	Pt	5,8*10 ⁰	2,1*10 ⁻³	7,9*10 ⁻²	2,1*10 ⁰	6,3*10 ⁻²	-1,1*10 ⁰

* 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.

** The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.

Resource use indicators

The balancing of packaging materials is carried out according to Option A.

Results per declared unit							
Indicator	Unit	A1-A3	C1	C2	C3	C4	D
PERE	MJ	4,9*10 ⁰	2,7*10 ⁻⁴	2,1*10 ⁻³	2,3*10 ⁻¹	5,8*10 ⁻³	-1,5*10 ¹
PERM	MJ	6,5*10 ¹	0,00E+00	0,00E+00	-6,5*10 ¹	0,00E+00	0,00E+00
PERT	MJ	7,0*10 ¹	2,7*10 ⁻⁴	2,1*10 ⁻³	-6,5*10 ¹	5,8*10 ⁻³	-1,5*10 ¹
PENRE	MJ	3,3*10 ¹	3,2*10 ⁻²	1,4*10 ⁻¹	2,3*10 ⁰	3,3*10 ⁻²	-6,5*10 ¹
PENRM	MJ	3,2*10 ⁻²	0,00E+00	0,00E+00	-3,2*10 ⁻²	0,00E+00	0,00E+00
PENRT	MJ	3,3*10 ¹	3,2*10 ⁻²	1,4*10 ⁻¹	2,2*10 ⁰	3,3*10 ⁻²	-6,5*10 ¹
SM	kg	1,00E+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	3,8*10 ⁻²	2,6*10 ⁻⁶	1,9*10 ⁻⁵	1,1*10 ⁻³	4,5*10 ⁻⁵	-1,0*10 ⁻¹
Acronyms	PERE = Use of renewable secondary energy excluding renewable secondary energy resources used as raw materials; PERM = Use of renewable secondary energy resources used as raw materials; PERT = Total use of renewable secondary energy resources used as raw materials; PENRE = Use of non-renewable secondary energy excluding non-renewable secondary energy resources used as raw materials; PENRM = Use of non-renewable secondary energy resources used as raw materials; PENRT = Total use of non-renewable secondary energy resources used as raw materials; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water						

Waste production and output flows

Waste production

Results per declared unit							
Indicator	Unit	A1-A3	C1	C2	C3	C4	D
Hazardous waste disposed	kg	$6,9 \cdot 10^{-5}$	$2,0 \cdot 10^{-7}$	$8,5 \cdot 10^{-7}$	$6,6 \cdot 10^{-3}$	$1,4 \cdot 10^{-7}$	$3,9 \cdot 10^{-3}$
Non-hazardous waste disposed	kg	$4,6 \cdot 10^{-1}$	$6,4 \cdot 10^{-5}$	$6,5 \cdot 10^{-3}$	$1,1 \cdot 10^0$	$1,0 \cdot 10^{-1}$	$-1,0 \cdot 10^0$
Radioactive waste disposed	kg	$1,9 \cdot 10^{-4}$	$6,0 \cdot 10^{-9}$	$4,3 \cdot 10^{-8}$	$2,0 \cdot 10^{-6}$	$6,1 \cdot 10^{-8}$	$-1,7 \cdot 10^{-4}$

Output flows

Results per declared unit							
Indicator	Unit	A1-A3	C1	C2	C3	C4	D
Components for re-use	kg	0	0	0	0	0	0
Material for recycling	kg	$9,6 \cdot 10^{-1}$	0	0	$9,0 \cdot 10^{-1}$	0	$9,0 \cdot 10^{-1}$
Materials for energy recovery	kg	0	0	0	0	0	0
Exported energy, electricity	MJ	0	0	0	0	0	0
Exported energy, thermal	MJ	0	0	0	0	0	0

Information on biogenic carbon content

Results per declared unit		
BIOGENIC CARBON CONTENT	Unit	QUANTITY
Biogenic carbon content in products	kg C	0
Biogenic carbon content in packaging, extruded	kg C	0,113
Biogenic carbon content in packaging, extruded and anodized	kg C	0,203
Biogenic carbon content in packaging, extruded and painted	kg C	0,195

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

Additional information

Information related to Sector EPD

Does not apply in this case.

Differences versus previous versions

All in all, the calculation setup is updated to correspond to the current version of PCR. The mutual arrangement of the contents of modules A1-A3 has been modified to ensure better alignment with their respective descriptions. This adjustment has a negligible impact on the overall results. Also, in the A1 module, the utilization of producer-specific data has increased due to its improved availability compared to the previous EPD update.

References

Ecobio LCA report – Purso's Aluminium products. 2024.

General Programme Instructions of the International EPD® System. Version 4.0.

PCR 2019:14. Construction products. Version 1.3.3

Phyllis2, database for (treated) biomass, algae, feedstocks for biogas production and biochar. TNO Biobased and Circular Technologies.

SFS-EN 15804:2019. Sustainability of construction works – environmental product declarations – core rules for the product category of construction products. Helsinki: Finnish Standards Association (SFS). 64 pages.

SFS-EN 14025:2006. Environmental labels and declarations. Type III environmental declarations. Principles and procedures. Helsinki: Finnish Standards Association (SFS). 28 pages.

SFS-EN ISO 14040:2006. Environmental management. Life cycle assessment. Principles and framework. Helsinki: Finnish Standards Association (SFS). 48 pages.

SFS-EN ISO 14044:2006 Environmental management. Life cycle assessment. Requirements and guidelines. Helsinki: Finnish Standards Association (SFS). 96 pages.

Appedix I. – Conversion factors for extruded and anodized as well as extruded and painted aluminium profiles

Impact category	Extruded and anodized					
	A1-A3	C1	C2	C3	C4	D
Climate change - fossil	1,06	1,00	1,00	1,00	1,00	1,00
Climate change – biogenic	1,15	1,00	1,00	1,00	1,00	1,00
Climate change – land use and change	1,02	1,00	1,00	1,00	1,00	1,00
Climate change – total	1,06	1,00	1,00	1,00	1,00	1,00
Ozone depletion	1,98	1,00	1,00	1,00	1,00	1,00
Acidification	1,17	1,00	1,00	1,00	1,00	1,00
Eutrophication aquatic fresh water	1,16	1,00	1,00	1,00	1,00	1,00
Eutrophication aquatic marine	1,12	1,00	1,00	1,00	1,00	1,00
Eutrophication terrestrial	1,11	1,00	1,00	1,00	1,00	1,00
Photochemical ozone formation	1,10	1,00	1,00	1,00	1,00	1,00
Depletion of abiotic resources – minerals and metals	1,97	1,00	1,00	1,00	1,00	1,00
Depletion of abiotic resources – fossil fuels	1,12	1,00	1,00	1,00	1,00	1,00
Water use	1,36	1,00	1,00	1,00	1,00	1,00
Additional impact category	A1-A3	C1	C2	C3	C4	D
GWP-GHG	1,12	1,00	1,00	1,00	1,00	1,00
Particulate matter emissions	1,07	1,00	1,00	1,00	1,00	1,00
Ionising radiation, human health	1,17	1,00	1,00	1,00	1,00	1,00
Ecotoxicity (freshwater)	1,19	1,00	1,00	1,00	1,00	1,00
Human toxicity, cancer effects	1,03	1,00	1,00	1,00	1,00	1,00
Human toxicity, non-cancer effects	1,07	1,00	1,00	1,00	1,00	1,00
Land use related impacts / soil quality	2,41	1,00	1,00	1,00	1,00	1,00
Generated waste	A1-A3	C1	C2	C3	C4	D
Hazardous waste	57,43	1,00	1,00	1,00	1,00	1,00
Non-hazardous waste	2,14	1,00	1,00	1,00	1,00	1,00
Radioactive waste	1,17	1,00	1,00	1,00	1,00	1,00

Impact category	Extruded and painted					
	A1-A3	C1	C2	C3	C4	D
Climate change - fossil	1,17	1,00	1,00	1,00	1,00	1,00
Climate change – biogenic	1,22	1,00	1,00	1,00	1,00	1,00
Climate change – land use and change	1,03	1,00	1,00	1,00	1,00	1,00
Climate change – total	1,17	1,00	1,00	1,00	1,00	1,00
Ozone depletion	1,41	1,00	1,00	1,00	1,00	1,00
Acidification	1,32	1,00	1,00	1,00	1,00	1,00
Eutrophication aquatic fresh water	1,35	1,00	1,00	1,00	1,00	1,00
Eutrophication aquatic marine	1,41	1,00	1,00	1,00	1,00	1,00
Eutrophication terrestrial	1,31	1,00	1,00	1,00	1,00	1,00
Photochemical ozone formation	1,32	1,00	1,00	1,00	1,00	1,00
Depletion of abiotic resources – minerals and metals	1,97	1,00	1,00	1,00	1,00	1,00
Depletion of abiotic resources – fossil fuels	1,46	1,00	1,00	1,00	1,00	1,00
Water use	1,36	1,00	1,00	1,00	1,00	1,00
Additional impact category	A1-A3	C1	C2	C3	C4	D
GWP-GHG	1,17	1,00	1,00	1,00	1,00	1,00
Particulate matter emissions	1,14	1,00	1,00	1,00	1,00	1,00
Ionising radiation, human health	1,55	1,00	1,00	1,00	1,00	1,00
Ecotoxicity (freshwater)	2,02	1,00	1,00	1,00	1,00	1,00
Human toxicity, cancer effects	1,07	1,00	1,00	1,00	1,00	1,00
Human toxicity, non-cancer effects	1,15	1,00	1,00	1,00	1,00	1,00
Land use related impacts / soil quality	4,01	1,00	1,00	1,00	1,00	1,00
Generated waste	A1-A3	C1	C2	C3	C4	D
Hazardous waste	209,7	1,00	1,00	1,00	1,00	1,00
Non-hazardous waste	11,35	1,00	1,00	1,00	1,00	1,00
Radioactive waste	1,55	1,00	1,00	1,00	1,00	1,00

